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I

PSYCHOLOGY AND EDUCATION

Whoever with philosophical arguments fights for idealistic convictions against materialism finds himself in combat not with one group alone but with two—with those who through serious arguments come to anti-idealistic views and with those who come to idealism without arguments at all. They may favor idealism through sentimentality, or through mysticism, or, the more frequent case, through laziness and mere lack of understanding of the arguments of the other side; their view has no solid foundation, no consistency, no power of resistance. With the first group you can argue; with the second group you cannot debate, as you speak a different language and think with a different logic. As soon as the real fight begins, you feel that the coincidence of aims is only a chance result without significance; the help of these friends is only a hindrance and a trouble and they ought to be sent away, like the women and children of a besieged city before the real bombardment begins.

This old experience came to me with unusual force when I a short time ago expressed my educational convictions, which take the idealistic view of the teacher's work as against the materialistic doctrines of certain psychological schools. I maintained in some popular articles in the *Atlantic monthly* that the individual teacher cannot make any direct use of physiological and experimental psychology for his teaching methods. Why this view alone lies in the line of idealism we shall see later. My articles were sharply

attacked from the other side, as the progress of a discussion demands, and I was ready to go on fighting. But at the same time I was applauded by sympathizers who did not care for my arguments at all, and who hailed my side only because it is much more convenient not to study psychology and education. They cried naïvely: "Of course the man is right, all experimental and physiological psychology is nonsense and all study of education is superfluous; let the teachers do just as they like; our grandfathers made it just so." From day to day I became more doubtful with which side I disagree more fully. If I warn education not to make progress in a wrong direction, must I proclaim by that that we ought to go backward? If I denounce a dangerous misuse of experimental psychology, do I attack with that experimental psychology itself? If I assert that the interest of the teacher ought not go in a misleading direction, do I demand by that that the teacher ought to be dull and without interest? If I regret that something has become the fad of dilettants, do I ask by that that scholars also ought not to deal with it? and if I find fault with the recent development of child study, do I imply by that the belief that we do not need a modern science of education? As long as such confusion is going on among assenters as among dissenters, we do not need so much argumentation as discrimination. We must have clearness and exact definitions before we decide about consent or opposition; and it is not sufficient to dissolve the whole interlaced mass of conceptions like child study, child psychology, experimental psychology, physiological psychology, educational psychology, education, instruction, school teaching, etc., etc.; but we must clear up above all the manifoldness of possible relations between these factors. An unpretending effort in this direction is the only direct purpose of the following lines; they try only to separate clearly the different questions and to show soberly what some of us want and what we do not want. I do not fight now, I only peacefully draw a map which indicates the different opposing positions.

We recognize at the first glance that our whole group of

conceptions has two central points which are logically independent of each other: the child and psychology. To simplify the matter, we may start with these two ideas only. Psychology is the science which describes and explains mental phenomena, and what a child is we know perhaps better without than with a scholarly definition. Let us only keep in mind that in the happy fields of child study childhood lasts from the cradle to the end of adolescence, usually to the twenty-fifth year. It is clear that even between these two conceptions a number of relations are possible, and the willingness to transform one of these relations in reality does of course not include the duty to do the same with the others. The child, for instance, can be taught psychology, or it can be taught after the scheme of psychology, or it can be an object of psychology, or it can be an instrument of psychology, and so forth. We can be enthusiastic for the one and nevertheless at the same time detest the other.

The simplest of the cases mentioned is the first: the child may learn psychology. But even here several modifications are possible, as it may be learned at different ages, by different methods, and different parts of psychology may be in question. I for one should say that there is a field here for sound and productive work and that we should not be hindered and crippled by the lack of experience in this region, or by the pitiable results which have had to be recorded in the past when an antiquated and indigestible psychology was taught, by incompetent persons to unwilling pupils, by the driest possible methods. For the instruction in modern empirical psychology, at least in its elements, the high school seems not at all too early a stage; only the work must be fully adapted to the practical experiences of the child, must be richly illustrated by simple experimental demonstrations, and must be given by competent men who could make a whole address out of every sentence they speak. There are few fields where a born teacher can better show his power and his wits. Philosophical psychology, including the historical forms of rational and speculative psychology,—certainly a most important subject for the college student,—

like all other real philosophy decidedly does not belong in the school; the more so as any instruction in philosophy which means more than drill in logic and preaching in ethics, can become valuable in any case only if a real scholar, and not a second-hand man, offers it. I should exclude from the schoolroom also the relations of psychology to the details of brain physiology and the whole of pathological psychology, and above all child psychology; the more so since we cannot hope that everybody would be in the happy situation of the teacher who reports in the *Pedagogical seminary*, the leading magazine for child study, that she brought a baby of three weeks into the classroom to demonstrate its smiling and crying and other functions of similar alarming interest. If we keep at a safe distance from such compromising caricatures we can, I believe, expect highly valuable results from psychology instruction in the school. At my suggestion my assistant in Radcliffe College started such a full course of modern psychology in Miss Hersey's school in Boston, and the work proved itself to be so welcome and suggestive, that a course on psychological æsthetics had to be added, and it developed to one of the characteristic features of the higher education of girls in Boston.

But the possibility of teaching psychology in schools is not at all confined to regular courses about the whole subject; special chapters of psychology find a most natural place in the different fields of the usual school work. It is impossible to teach physics without discussing the acoustical and the optical sensations; the drawing teacher may discuss the conditions of our space perception or the optical illusions or the seeing of colors; the study of history or literature not seldom brings with it a psychological analysis of the higher mental states, and a school child's curiosity rushes again and again to questions which only a sober knowledge of psychology can answer satisfactorily. It seems therefore not too much to demand that at least every high-school teacher should have some familiarity with the elements of psychology. He may be asked to teach it as a whole or he may be obliged to inter-

weave parts of it with his other work; in any case he ought to have the facts of that science at his disposal as a material which he can teach like arithmetic or geography. This alone would be for me sufficient reason for welcoming every future teacher in the college courses of psychology, but this attitude would not have the slightest relation to the other question whether the teacher ought to know psychology for the purpose of making use of it for his professional methods of teaching. But we do not stand as yet before this latter question, which is much more complicated; if we follow up the different relations between psychology and the child, the next question in natural order has to leave educational theory still out of the play. We have asked so far what the child can learn from psychology; we must ask now what psychology can learn from the child.

The question divides itself at once into many ramifications. Even if we abstract, as we planned to do, from all practical applications, and consider only the interests which psychology as a theoretical science can have in the child, we must from the start acknowledge two different points of view which are too often confused. The child's mind can be firstly the real object of psychological study, and the child's mind can be secondly a vehicle for the study of the human mind in general, a tool in the hand of the psychologist. It is the same doubleness which we find, for instance, with regard to the pathology of the mental life. The pathological mind can be as such certainly an important object of study, but it is such an object in first line for the psychiater, not for the psychologist. The physician, of course, puts the whole psychology in the service of these pathopsychological cases which he analyzes in the hope of improving them. The psychologist, on the other side, attends to such abnormalities only as deviations from the normal soul—variations which seem interesting to him only because they throw some new suggestive side light on the normal processes. He studies the disturbed harmony in the hope that the caricature-like exaggeration of the special features will bring out a fuller understanding of their normal relations.

In exactly the same way we can approach the child's mind as an object worthy of our interest in and for itself, prepared to make use of our whole general psychological knowledge for the exploration of this new field; or we can turn to the mental life of children, with the purpose of getting through this study new paths of entrance to the old field of general human psychology. If the soul of the child is the object, all studies of this kind group themselves with the inquiries about other sides of the nature of children, with the anthropology and the physiology and the pathology of the child; a bundle of investigations for which the name child study is perfectly correct, while to some ears the name paidology seems to sound better. If, on the other hand, the child's mind becomes an instrument for investigating the phenomena and the laws of the mental mechanism, then of course the observation and experimentation on children is merely one of the many methods of empirical psychology, co-ordinated to the pathological and hypnotical and physiological and other methods which supplement by ways of indirect observation the direct self-observation of our laboratory work. It forms then a narrower group together with the psychical studies of animals and primitive races, all aiding in the understanding of the complicated mental life of the highly developed adult man, by showing the different stages of the ontogenetic and phylogenetic development. Its special function can then well be compared with the service of embryology to the general human anatomy. If child study is an end in itself, every fact in the child's mental experiences is of equal importance or at least of equal scientific dignity; if it is only a method in the service of psychology, science will carefully select only those facts by which the labyrinth of the developed mind becomes simpler and clearer while everything else remains indifferent. If child study is the object, we start from our knowledge of the man to interpret the child; if child research is a method, we seek knowledge about the child to start therefrom to the interpretation of the man.

This is, however, not the only point of view from which to classify the manifold efforts which are possible in this realm;

it is the most central division, but it shows cross-sections with many other principles of division. The classification may, for instance, refer to the different stages of the development, especially according as the time before or in or after school life is in question. But still more important: according as the observation goes on under natural conditions or under the artificial conditions of experiment; according as the inquiries are of individual character or seek for statistical results on the basis of large numbers; above all, according as the work is done by professional, at least specially prepared, psychologists or by psychological amateurs, who may be most excellent creatures in every other respect. Of course an exhaustive classification ought not to stop here. We can divide further; for instance, as the psychologists in question are such as have their theories beforehand or such as do not, and as the dilettants who observe the children are people who know that they do not know psychology or people who don't know even that.

The possible combination of all these factors secures such a manifoldness of types of research in this field that the mere collection of the results on the basis of co-ordination would contradict all principles of scientific methodology. If I may be allowed a word of criticism, I should not hesitate to claim that child study ought to be a method and not an end; that it ought to be done individually and not statistically, by professionals and not by dilettants, more by natural observation and less by experiments. These decisions hang, of course, closely together. If I take paidology as a science by itself, then I should share perhaps also that enthusiasm and delight over those heaps of statistical and experimental results which mothers, teachers, and nurses have brought and certainly will bring together. But all my instincts about the inner relations and connections of human knowledge resist to the utmost this artificial separation of child psychology from the general psychology. I may write a special book on the mental life of the child just as I can write a monograph on memory or on hypnotism, but it has its right of existence finally only by its necessary place in the whole system of psy-

chology. To be sure, the chief reason for taking this attitude lies in a conviction which I must bring forward in the following discussion again and again, and which is rather the central motive for my position in all these debates. I indicate the point perhaps most quickly if I say: Psychology is a study of mental facts, but not every study of mental facts is therefore psychology. That psychology is a science and therefore every science psychology, probably nobody pretends, and yet the logic of the conclusion would not be worse than that which is so often offered to us when every gathering or interpretation or statistics of mental facts is claimed as psychology. Most of the material which the friends of child study heap together is, even when mental facts and not physical ones are in question, nevertheless not psychology at all; and that small remainder which really contributes to a psychology of the child's mind belongs so clearly to general psychology that nobody would dream of an artificial separation if it were not usually so hopelessly mixed with all the unpsychological odds and ends.

Certainly the good appetite of psychology has become in our days sometimes voracity, and she has begun to devour all mental sciences, history and social life, ethics and logic, and finally, alas! metaphysics; but that is not a development, that is a disease and a misfortune. And when the necessary conflict between such high-handed psychology and the deep-rooted demands of the true life begins, such uncritical science must burst asunder. Psychology would learn too late that an empirical science can be really free and powerful only if it recognizes and respects its limits, about which philosophy alone decides. The limits of psychology are easily understood. Psychology considers the mental life as an object which must be analyzed and explained, analyzed in elements and explained by laws. The psychologist, therefore, silently accepts as presupposition that the mental life is such an object and that these objects are combinations of elements controlled in their connection by causal laws. In the reality of our inner experience our mental life has not at all these characteristics: the ideas are objects, while the feelings and voli-

tions are subjective activities, and these objects are experienced as wholes and units, not as composita, and these activities as controlled by freedom, not by laws. Psychology thus presupposes for its purposes a most complicated transformation of the reality, and any attitude toward the mental life which does not need or choose this special transformation may be anything else, but it is not psychology. Practical life and history, mental science and poetry, logic and ethics, religion and philosophy all deal with mental life, but never with psychology as such. Not the material but the special standpoint characterizes the psychologist.

As soon as we are clear in regard to this elementary philosophical principle we cannot indeed doubt any longer that most of the so-called child psychology is partly history, partly economics and ethics, partly physiology, partly nothing at all, but decidedly not psychology. To be fair I choose as illustration one of the very best investigations in the field, one which seems to me seriously interesting and important: the extended statistical studies about the stock of ideas which a child has when it enters the school. The differences between city and country children, between different home influences, between different nations and so forth come clearly to view and the results suggest a continuation of these studies —but these results do not belong to psychology. The material of this inquiry is ideas, but not these ideas with regard to their constitution and their elements, but with regard to their practical distribution: it is not scientific botany to find out in whose yard in the town cherries, in whose yard apples grow. Suppose the same investigation made for adult persons: among a thousand men of fifty years of age how many have had impressions from such and such objects? How many have seen a phonograph and how many a walrus? The results would be a quite interesting contribution to the history of civilization, but nobody would think of classifying it under the psychology of the adult man, as we do not learn anything about the psychological structure and origin of an idea if we know that A happened to experience it while B never had a chance. This imitation of

the so-called psychological studies on children by similar studies on adults gives us indeed perhaps most quickly an insight into their real character. The *Pedagogical seminary* offers us a splendid collection of the teasing and bullying phrases which are in the mind of children or it reports the careful statistics that among 845 children exactly 191 preferred wax dolls, 163 paper dolls, 153 china dolls, 144 rag, 116 bisque dolls, 69 rubber dolls and so on, or it studies the love poems of boys and discovers that among 356 poems only 91 refer to the eyes, 50 to their expression, 41 to their color—blue leading with 22. We could choose just as well a hundred other illustrations. Now let us try to repeat such inquiries with adult men: let us find out what preferences they have in cigarette-holders and meerschaum pipes, or how often they refer to the eyes in flirting, or what their disponible material of nicknames and abusive words may be. The results will not be much less instructive than those from the study of the children, but surely you would not call them psychology.

If we exclude thus everything which is not really psychological, there remains of course still a good set of problems which belong strictly to the psychology of the child; the analytic study of its perceptions and associations, its memory and attention, its feelings and emotions, its instincts and volitions, its apperceptions and judgments to be described and explained with regard to their elements and laws; but this group can certainly not be separated from the psychology of the adult. There are the same elements and the same laws building up the mental life in all its different stages of development. The study of the child's mind shows itself then clearly as that which we claimed it to be: one of the many legitimate methods of studying the mental laws and elements in general. We could better have a special botany of the blossoms or a zoölogy of the eggs as scientific ends in themselves than a separated psychology of the children. On the other hand, if it is truly a method and vehicle of the general mind study, then certain consequences are unavoidable. In the service of general psychology child study has, first, to select its problems. What

is the use of analyzing with the doubtful means of indirect observation those psychical states which we can find as the objects of direct observation in our own minds? Only that must be selected which allows us to push the analysis forward by showing our complicated states as preceded by simpler and simpler ones. But if the leading principle is thus a selection of material best fitted for clearing up the development of the complex combination of elements, it follows that the study of individual children is by far superior to the statistics in which the individual disappears, and that protracted observation is by far more important than the experimental investigation of a special stage. It follows, secondly, that the work must be done by trained specialists or not at all. That child study which has for its aim only the collection of curiosities about the child, as an end in itself, may be grateful to the nurse who writes down some of the baby's naughty answers or to the teacher who sacrifices half an hour of her lesson to make experiments in the classroom to fill out the blanks that are mailed to her. The students of that scientific child psychology which stands in the service of the general mind study know how every step in the progress of our science was dependent upon the most laborious, patient work of our laboratories and the most subtle and refined methods, and that all this seductive but rude and untrained and untechnical gathering of cheap and vulgar material means a caricature and not an improvement of psychology. And it is not only the lack of technical training which brings these contributions so near the hunting stories and their value for scientific biology. No, it is, above all, the absence of the psychological attitude. That is in my eyes not an opprobrium against the teacher. I consider it to the teacher's credit that the child is not an object of analysis for him, but I blame those who make the teacher believe that his observations nevertheless have value for psychology.

Of course I know that some of the more sober leaders of this movement emphasize very little the scientific value of such private adventurous expeditions of parents and schoolteachers, and praise most highly the expected result that the

teachers themselves get thus a more vivid interest in the children. I have to discuss this point later, and acknowledge here only that the child-scholars themselves begin to doubt whether this gossip contained in the blanks means science or rubbish. Those who doubt, however, ought then also not to find comfort in the frequent comparison that the guileless teacher may collect the facts of the young souls like the wanderer who brings plants and stones home which the naturalist will use later as material. No, psychological material cannot be put in the pocket like a stone; it is not only the fixation and communication of the found and perceived material that has its difficulties, but the finding and perceiving itself is in the highest degree dependent upon associations and theories already stored up.

Finally, even if all the stuff is reliable and truly psychological, even then we ought not to exaggerate our hopes for real information. As long as the thousand little facts are not connected by a theory, the facts are dead masses, and if they are only illustrations of a theory, they do not teach us anything new. It will be a very exceptional case that a new insight into a law can be reached through this chance way; physics has certainly, in spite of Bacon's recommendation, never reached anything in this way. In the best case the result will be a psychological commonplace. The *Pedagogical seminary* prints 375 thoughts and reasonings observed in children, and true to its scientific intention it adds that this material is not sufficient. But I confess that I do not see what profit could possibly result for the psychologist from even three millions of such sayings. If we do not know the general facts of association, attention, apperception, and conception, then the whole material is mere gossip without psychological interest, and if we do know them and presuppose as a matter of course that the child has smaller experiences, fewer associations, and so on, then the material teaches us no more for the psychology of thought and reasoning than a collection of any 375 sentences of adult persons would do. Yet these nobody would think of reprinting. We ought not to deceive ourselves with trivialities. It is not

science to make even the most exact statistics of the pebbles on the road and to collect the description of some hundred cases where the law of gravity was confirmed by the falling down of apples. Let us delay such luxury till the real duties of child psychology are fulfilled; that is, till in the service of psychology the development of the single mental functions especially of the self-consciousness, of the will, of the emotions, and of the ideas of space and time, is studied on individual children by really competent men with strictly scientific methods, a line of work in which we have to be grateful to Preyer, Perez, Stanley Hall, Baldwin, Sully, and other psychologists for a most valuable beginning.

The only part of the work for which I should welcome the co-operation of untrained observers is the search for, not the real study of, abnormal cases. Pathological abnormalities in the child's mental life, in its emotions and imitations, its feelings and its will, are psychologically decidedly instructive, and the psychologist has no possibility of finding them if the layman does not draw his attention to them. Such unusual deviations in full development strike the eye of every man; there is no special psychological attitude necessary.

Our question was, so far, only to what extent theoretical psychology has an interest in children. This simple issue becomes in practice, however, far more complicated by the hopes and fears which may be connected with this scientific work in the interest of the children and of their educators. Of course psychology as such is not concerned in this question; psychology does not work for a social premium and cannot be determined in its course by social anxieties. But the psychologist, as a member of the social organism, has to adapt his endeavors to the needs of society; he must feel encouraged if he shares these social hopes and can feel himself an educational benefactor, and he will modify his officious disposition if he becomes convinced of the educational fears. The pessimistic group sees in all psychological experiments on children an unsound interference with their natural development, a kind of mental vivisection which, by the artificial stimulations and tensions, may become harmful even to the

health of the nervous system. Even observation under natural conditions seems to them of unfavorable influence on the *naïveté* and naturalness and modesty of the young subjects. Above all, they fear that the forced change of attitude in the teacher will do harm to the whole school life. In the interest of the teacher himself they add that such studies in the schoolroom burden the already too much burdened man with work for which he himself does not feel sufficiently prepared; that he himself feels hampered by this new way of looking on the children, not as friends but as interesting results of psychological laws; that he needs every minute of his school hours for his lessons, and that he stands too often before the dilemma either to follow his educational conscience or to follow a superintendent who believes in the newest educational fad. The optimistic group holds of course to the exactly opposite view, sees no harm for the children, but the bliss of a deepened interest of the teachers in the children, and a subsequent lifting of the whole standard of the school life. It is clear that such a background of antagonistic social movements complicates highly the theoretical problem. On the other hand, these hopes and fears about the practical effects of child psychology cannot be separated from the wider question what the teacher has to expect from psychology in general.

Our plan to map out the whole manifoldness of antagonistic tendencies in the entire psycho-educational field brings us thus necessarily to a large group of new problems. We have discussed so far whether the child can study psychology directly, and secondly whether psychology can directly study the child. We must ask now whether psychology cannot have also, indirectly, an influence on the child through the medium of the teacher; that is, whether the work of the teacher can be modified by psychology. But the question shows at once many important subdivisions; if we do not consider them, the result must be the confusion of Babel. The fact that we spoke before of the value of child psychology for the teacher, and are now discussing psychology in general, suggests from the start that we have to discrimi-

nate the different departments of our science. It may be that child psychology is educationally useless but physiological psychology excellent, or that experimental psychology is the elixir but rational psychology the poison. In any case, however, we have no right to throw all such methodologically separated parts of mind study together and to decide about right or wrong in a wholesale manner. But another division of our question reaches still deeper: is psychology valuable to the teacher for his teaching methods directly, or only indirectly through the medium of a scientific educational theory? In the first case the teacher himself transforms his psychological knowledge into educational activity; in the other case educational theory has performed for him the crystallization of educational principles out of the psychological substances, and he can follow its advice perhaps even without knowing himself anything about psychology. The two cases are so absolutely different that here, still more, an assenting or dissenting attitude toward the one proposition cannot have any point at all with regard to the other. Just those who are convinced that the teacher ought to study education, and that education ought to make the fullest use of psychology, may be perhaps the strongest opponents of the psychologizing teacher who manufactures his private educational theory from his summer-school courses in experimental psychology. I shall separate therefore the two questions fully, and ask first, how far the individual teacher can make direct use of psychology for his teaching; and secondly, how far psychology is useful for the science of education.

I turn to the first question, which must now, as we have seen, be subdivided with regard to the different departments of possible mind study. A full exposition of the different parts of psychology and their complicated mutual relations would lead us of course far beyond the limits of this sketch, but we cannot avoid giving our attention at least to some of the essential points. Of all the conceptions in question only that of child psychology does not need any further interpretation. We have seen that it does not by any means include

every scientific interest with regard to the mental life of the child, but only those studies which consider its mental life under the categories of psychology—that is, with regard to their elements and their causal laws; we have seen further that a child psychology of this type does not claim to be an end in itself, but only a method of the general psychology.

Still simpler, if rightly understood, is the situation of the "experimental psychology." Here there is still less doubt that it is separated from the other branches, not by its special objects but only by its special method—the experiment. The frequent misunderstandings begin only if it is identified with indirect observation in opposition to self-observation, or claimed as a mathematical science in opposition to a merely qualitative analysis, or understood as physiological psychology. All that is impossible. Experimental psychology is, first, so little in opposition to self-observation that self-observation forms rather the largest part of experimental psychology; we can say that the whole work of our modern psycho-physical laboratories must be characterized as essentially introspection, but introspection under artificial conditions. To be sure, experiments with indirect observation are also possible, as experiments on hypnotized subjects or on animals and so forth, but they are only exceptional guests in our laboratories. Experimental psychology in any case exists wherever psychological observations, direct or indirect, are made under artificial conditions chosen for the special purpose of the observation. Experimental psychology is, secondly, so little a mathematical science that every hope of introducing mathematics, even in the smallest corner of psychology, can easily be recognized as a failure in principle. Psychical facts are not and cannot be measurable, and the more and less in our mental life never means an addition of psychical elements; we measure the physical conditions, but never the mental facts themselves. Experimental psychology is finally so little identical with physiological psychology that we can rather say it needs for its existence no relation to physiology at all. We study in our laboratories experimentally associations and

memory, attention and apperception, space sense and time sense, feelings and will, without being obliged to know officially that there exists a brain at all.

That brings us to the question what physiological psychology is, as the latter statement presupposes a definition of the term with which not everyone would agree. The word has indeed been used with quite different meanings. We can separate especially two types of use, a wider and a narrower one. In the wider sense of the word physiological psychology means the study of mental phenomena in their whole relations to any physiological processes, central or peripheral, in the brain or in the sense organs, in the nerves or blood vessels or muscles. In the narrower sense it means only the study of the relations between the mental facts and the accompanying physiological brain processes. The merely terminological question is not essential for us, and it is indeed in part only terminological, as there cannot be any doubt that the studies of both kinds are legitimate. Nevertheless there are good reasons for getting rid of the first use of the word and for sticking to the second. The first use suggests clearly the mistaken idea that there can be a psychology which does not refer not only for the explanation but for description and analysis in every moment to peripheral physical facts. That is not a defect or a caprice of our present psychology; for epistomological reasons there can never be any analytic description of psychical facts which does not refer directly or indirectly to the physical objects which are in relation to our organism. The psychical fact as such is for philosophical reasons just as undescribable as it is unmeasurable, since it is the object which by principle exists for one only and which remains therefore ever uncommunicable. Every attempt to have a science which describes mental facts must thus relate in every stage the psychical facts to the physical facts; in short there cannot be any empirical psychology at all which is not from the beginning to the end only physiological psychology in the wider sense of the word. The addition of the word physiological has then no longer any meaning; it does not, if we think consistently, mark any

special group of studies, as it belongs to all, and this whole is certainly better characterized by the epithet empirical which stands over against speculative, than by physiological, which has no correlative and which we need much more for that special group of psycho-physiological problems. The study of the mental facts in their relations to the physiological brain processes is indeed a scientific field by itself, with its own anatomical and physiological and pathological methods and with its own theoretical unity. But this field has a quite different aspect from what most people, and even most teachers, believe. They believe often that the analysis of the psychical facts was in a poor and rather unscientific condition till the developed brain physiology, with its cells and fibers and gyri and centers, came and helped her poor relation. Really it is not at all so. Psychology knows endlessly more about these details than physiology, and in the development of the special psycho-physiological theories psychology was always leading, and taught physiology how to interpret the chaos of brain facts. Brain physiology without psychology would have been perfectly blind, while psychology without detailed brain physiology would stand exactly where it stands to-day, if we allow to psychology the general *a priori* postulate that every mental fact is the accompaniment of a physical process. This postulate is merely epistemological, and therefore independent of our knowledge of physiology. We must demand it because mental facts, as they are not quantitative, cannot enter into any causal equation. The demand for a causal interpretation of the mental life includes, therefore, the postulate that it must be transformed so that every element can be thought as linked with a physiological process, but whether that process is going on in the occipital or in the parietal part of the brain is, for psychology, absolutely indifferent. In short the whole physiological psychology consists of two factors: first, a general theory of psycho-physiological relations which is merely based on philosophical and general biological principles and does not need physiology at all, and second, psycho-physiological details which are important for the physiologist, but are for

psychology a useless luxury. The special physiology of the brain, which is in any case still an almost unknown field, does not therefore help the psychologist anywhere; in my lectures on psychology before my students I do not speak a word about the brain centers and the ganglion cells, and to base on them psychological insight turns our whole knowledge topsy-turvy.

The three usually vague and misinterpreted conceptions of child psychology, experimental psychology, and physiological psychology have now taken for us clear and sharp forms, and we understand the relative importance of their aims. We must now ask of what use they are for the individual teacher. My answer is simple and is the same for all the three branches: I maintain they are not of the slightest use. Whether the special mental facts are in the one or the other gyrus of the brain, whether the development of the child's mind favors the one or the other theory about the constitution of a special mental phenomenon with regard to its psycho-physical elements, and finally, whether the laboratory experiments go along this or that track, are questions of absolutely no consequence to the teacher. Of course I have not the right to speak about my personal attitude, as I started to show objectively the opposing positions, but I confess in this case I do not see two sides at all. I do not see how anyone can hope that the teacher will profit for his teaching methods from these three fields the moment they are correctly defined and are not mixed in the usual *mélange* with other things. Where a serious plea for them is made, always either those psychological fields are misinterpreted or the teacher is substituted for the science of education.

The case of physiological psychology is the simplest one. There was never a teacher who would have taught otherwise, or would have changed his educational efforts, if the physiological substratum of the mental life were the liver or the kidneys instead of the brain. We have seen that here psychology has nothing at all to learn from physiology, and that it is a caricature of the facts if you tell the teacher that he learns anything new about the mental life if he knows by

heart the accompanying brain processes; and if the teacher, in the hope of understanding better the inner life of children, studies the ganglion cells under the microscope, he could substitute just as well the reading of Egyptian hieroglyphs. All the talk about the brain is, from the standpoint of the teacher, merely cant, and I say this frankly at the risk of giving pleasure to those who do not deserve it—to those who are only too lazy to study anatomy.

I insist the situation lies in no way more favorably for child psychology and experimental psychology. Both sciences, as we saw, have as their aim to be methods of analysis and explanation of the normal psychical facts; child psychology reaches that goal by following up the development, experimental psychology reaches it by introducing artificial variations of the outer conditions. Both have thus merely the one purpose, to aid our looking on mental life as if it were a combination of elements, a composition of psycho-physical atoms. I know that such a transformation of the inner life is extremely important for many scientific purposes, but I am convinced, too, that such an atomizing attitude is directly antagonistic to the attitude of the true practical life, and thus opposite to the natural instincts of the teacher toward his pupils. In practical life our friends come in question for us only as units; their mental life interests us only in so far as it means something to us and express the real, willing personality. Decompose it for logical ends in the constructed elements as atomistic sensations, and their sum is no longer the inner life of our friend. The naturalistic decomposition into elements is most valuable for its purposes, but the purposes of life and friendship and love and education are others. There is no necessary competition between these different purposes; that which serves the one is as true as that which serves the other, because truth never means a mere repetition of the one reality, but a transformation of reality in the direction of logical ends. The view of man as a free being, as history must see him, is exactly as true as the view of man as an unfree being, as psychology must see him; and the friends' and educators' view of the child as the indissoluble unit and willful

personality is just as valuable and true as the psychologist's view which sees it as a psycho-physical complex mechanism. You destroy a consistent psychology if you force on it the categories of practical life, but you destroy also the values of our practical life if you force on them the categories of psychology. In experimental psychology, or in child psychology, the emotion may show itself as composed of circulatory and muscular elements, and the will made up from muscle and joint and skin sensations; but if you offer such transformed product to the teacher, you do worse than if you offer to the thirsty man one balloon filled with hydrogen and one filled with oxygen instead of a good swallow of water. The chemist is quite right: that *is* water; the fainting man insists that it is not, and life speaks always the language of the thirsty.

Do I mean by all this that the teacher ought to be without interest for the mental life of the children, a dull and indifferent creature without sympathy for the individualities and desires and characteristics of the pupils? Just the contrary is true. I detest this mingling of the teacher with psychology just because I do not wish to destroy in him the powers of sound and natural interest. It was my point from the start that not every interest in mental life is psychology, but that psychology studies mental life from a special point of view. I separated sharply, therefore, child psychology from other kinds of interest in children's minds, and the psychological sciences from the historical and normative sciences. Certainly the teacher ought to study children and men in general, but with the strictly anti-psychological view he ought to acknowledge them as indissoluble unities, as centers of free will the functions of which are not causally but teleologically connected by interests and ideals, not by psycho-physical laws. The study of the mental life of man from this other point of view is not a special science; it belongs partly to history and literature, partly to logic and ethics and philosophy, partly to poetry and religion. Here may the teacher wander at his ease, and he will learn to understand man while psychology teaches him only to decompose man. Have you never ob-

served what bad judges of men in real life the psychologists are, and what excellent judges of men the history-makers and historians are? Not a little of this desirable knowledge about the real inner man and his unity of intentions may be found also in the so-called "rational psychology." To be sure, it is in its deductions often too dependent upon metaphysics, and, above all, we must not forget that it is, strictly speaking, not psychology at all, as it aims toward synthesis, not toward analysis; but it is full of that which the teacher needs: suggestions to intensify interest for the child's mind by a deeper understanding of its volitional relations, and by a critical appreciation of mental values for the inner life. The teacher needs interest in the mental life from the point of view of interpretation and appreciation; the psychologist, with his child psychology and experimental and physiological psychology, gives him and must give him only description and explanation. Pestalozzi and Froebel were no psychologists.

This standpoint does not at all exclude the existence also of facts which demand that the teacher change his attitude and consider the child from the naturalistic atomistic psycho-physical point of view; and also for this case the teacher ought to be prepared. I have in mind the facts related to physical and mental health. To be sure, the questions of hygiene, of light and air and refreshment and fatigue, of normal sense organs and muscles but also of normal mental functions, of pathological instincts and emotions, abnormal inhibitions and mental diseases, are by a hundred threads connected with the schoolroom, and there is not the slightest doubt that they have to be treated from the psycho-physical point of view. That is no inconsistency; these facts belong indeed to an absolutely different system of relations, which has to be cared for but which is not the system of the educational relations. The word which I am writing now belongs to the stream of my thoughts and at the same time to the stream of my fountain pen—I have to take care of both. In the moment when the teacher takes care of the child's myopia or hysteria he is not teacher but psycho-physiological adviser of the child, just as it is not my function as a scholar to fill my fountain pen.

Nobody overlooks that it is extremely important for society that the teacher is well prepared to fulfill this naturalistic function, too. Much misfortune could be avoided if every teacher was especially trained to recognize pathological disturbances of the mind in their first beginnings, and for that he would indeed need some real psychology. Only do not say that he needs the psychology as teacher, for he may remain a good teacher in spite of the psychology which he studies in the service of hygiene.

This last discussion referred only to the question how far psychology interests the individual teacher as a help in his efforts, but that was only the one side of the more general problem, how far psychology can be helpful to education. There remains the other side: how can psychology influence education through the mediating channel of a scientific educational theory; and it is clear that here again the questions are so independent of each other that a mixture of the two must result in confusion. We can be convinced that the view of the teacher ought to be not psychological, and we can nevertheless demand that education as science make the fullest possible use of every branch of psychology. Exactly that has always been, and is to-day, my hope.

To be sure, the impression which the theories of education make in our day is in no way overwhelming. The demand for educational wisdom is decidedly greater than the supply, and neither great systems nor imposing thoughts characterize the educational theory of our age. The whole educational trade does its business to-day with small coin. Our time needs again a man like Herbart. But one very favorable condition for the strong development of education is at least given: the widespread conviction that we need it. No time before has so seriously called for a specialistic help from scientific education, and if, for want of revolutionizing great thoughts, we demand anything from it, then we demand that it carefully makes use of the whole empirical knowledge of our time to transform it into suggestions for the teacher. A responsible administration will transform those suggestions then further into obligatory prescriptions. Among this

empirical knowledge which education unites to a new practical synthesis certainly psychology plays one of the most important rôles in determining the means by which the educational ends can be worked out. There is no reason to confine this to a special branch of psychology; all that the analytical study of mind offers by experimental or physiological methods, by self-observation or by statistics, by child psychology or by pathology, by "old" or by "new" means, in short the best and fullest psychology of the time has to be one of the tools in the workshop of education. The educational scholar differs in two essential respects clearly from the individual teacher. First, while the teacher's practical attitude must suffer, as we saw, by the influence of the antagonistic psychological attitude in the same consciousness, the theoretical teacher, who does not teach himself, can of course easily combine the two attitudes and alternate between them. The teacher must live fully in the one attitude, and every opposite impulse inhibits him; the student of education remains in a theoretical relation to each of them, and can therefore easily link them. He can take the whole wisdom of psychology and physiology and remold it into suggestions for the practical teaching attitude. The teacher ought thus to receive finally, indeed, the influence of psychology, but only if the causal facts are by someone else transformed beforehand into teleological connections, adapted to the teacher's unpsychological work. The bread which the teacher bakes for his classes comes thus indeed partly from the wheat on psychological fields, but the corn must be ground beforehand in the educational mills. And the second point is not less important: such transformation of psychological investigations into ideas how to teach may successfully be done by the steady co-operation of a large number of specialists who make a whole lifework of it, but absolutely never by a single teacher. He may run through the laboratories and digest the statistical tables; he may learn by heart the numberless papers of the periodicals and feast on microscopical ganglion cells, but nowhere will he find anything which suggests really a whole plan or a straight im-

pulse. A thousand little odds and ends without the slightest unity are in his hand, and if he really believes himself to have the material for a little prescription, then he probably does not see how directly it contradicts other indications. It is impossible for him to overlook the whole field, and nobody can ask him to do privately, by the way, a work which gives sufficient occupation to a whole generation. Even the slightest progress in the field presupposes a full acquaintance with the whole literature of the special subject. We cannot demand that from the much-burdened practical teacher, even for any one problem; how absurd to hope it for all those which he practically needs: for memory and attention, for imagination and intellect, for emotion and will, for fatigue and play, and a hundred other important functions. Do we not lay a special linking science everywhere else between the theory and practical work? We have engineering between physics and the practical workingmen in the mills; we have a scientific medicine between the natural sciences and the physician. If a man prepared with the most wonderful knowledge of the anatomy, physiology, pathology, and chemistry of the century should begin medical practice and write prescriptions without having passed through training of real medicine, he would be either the wildest quack, who cures one organ at the expense of a dozen others, or he would throw away his theoretical wisdom and follow his practical instincts. Those ten thousand little laboratory experiments he knows would only confuse him if a whole generation of medical men had not, in specialistic co-operation, worked them up for practical use. Only, two points such a theory of education must not forget.

On the one hand, education forgets too easily that such psycho-physical material is only a part of the stuff to be mixed and filtered and brought into solution before the educational principles are crystallized. The causal analysis of the psycho-physical variations and possibilities must at every point be combined with the teleological interpretations of the ends suggested by ethics and æsthetics, by history and religion. It is not enough to substitute for a serious study and examination of the latter half a mere personal taste and capricious

instinct, which takes as matter of course that which ought to be scientifically criticised. Carelessness in the teleological part makes the synthesis just as dilettantic and useless as ignorance about the causal material. Nothing ought to be taken there for granted. Take one simple illustration instead of a thousand. The statistics show a very poor knowledge of the natural objects of the country on the part of the youngest school children. The investigator makes the educational conclusion that the preparation in that respect must be improved. But who gives us a scientific right to take for granted that early acquaintance with natural objects is at all desirable? Socrates did not think so; not the stones but only the men can teach us. The best education is certainly not that which gives a little bit of everything. We must develop some and must inhibit some psychological possibilities; psychology as such cannot decide on that. Only if education succeeds really in amalgamizing the two sides, and becomes something else than merely picked-out psychology, only then can we tell the teacher that he finds the study of man which suits him not only in philosophy and history and literature, but also in the handbooks and seminaries of education.

But education must appreciate also a second point. It cannot expect to find every necessary psychological and physiological information always ready-made. As no science is merely a collection of scraps, psychology as such cannot examine every possible psychological fact in the universe, but must select just those which are essential for the understanding of the psychical elements and laws. This choice in the interest of psychology differs of course fully from the choice of psychical facts which education would select for its own purposes. Here the science of education must take the matter in its own hand and must work up, with all the subtle means and methods of modern psychology, those psychological phenomena which are important for the special problems; the most intimate relation to the psychological laboratories is here a matter of course. In what form education will fulfill this demand may be of course at first itself a matter of educational experiment. Some believe in special

psycho-educational experimental laboratories, some believe in special experimental schools, and recently the proposition was made for the appointment of special school psychologists attached to the superintendent's office in large cities. In any case the work has to be done; the psychologist as such cannot do it, and the teacher cannot do it, either. For the psychologist it would be a burden, for the teacher it would be a most serious danger; the student of education alone can do it. Of course even these adjuncts of superintendents, and these principals of experimental schools, must never forget that their work refers always only to the one half, which is misleading without the other half—to the causal system, which must be harmonized with the teleological one.

Personally I consider the psycho-educational laboratory as the most natural step forward. Such laboratories would be psycho-physical laboratories, in which the problems are selected and adjusted from the standpoint of educational interest. All that has been done so far in our psychological laboratories for the study of attention, memory, apperception, imagination, and so on has had, in spite of the seductive titles, almost never anything to do with that part of these functions which is essential for the mental activities in the classroom. While the individual teacher, as we have seen, has to keep away from our psychological laboratories because our attitude is opposed to his, the student of education ought to keep away from us because, in spite of the same attitude, we have too seldom problems which belong to his field. It is a waste of energy to hunt up our chronoscope tables and kymograph records for some little bits of educational information which the psychologist brought forward by chance; sciences cannot live from the chances of work which is intended for other purposes. When in the quiet experimental working place of the psycho-educational scholar, through the steady co-operation of specialists, a real system of acknowledged facts is secured, then the practical attempts of the consulting school psychologist and of the leader of experimental classrooms have a safer basis, and their work will help again the theoretical scholar till the co-operation of all these agents

produces a practical education which the teacher will accept without his own experimenting. Then the teacher may learn psychology, to understand afterward theoretically the educational theory he is trained in, but he himself has not to make educational theory and not to struggle with psychological experiments.

There is no fear necessary that such psycho-educational laboratories would have too few problems at their disposal; a fear which can be suggested by the fact that the friends of this movement refer always to the same few show pieces, the experiments on fatigue, on memory, and on association. The situation would develop itself just as twenty-five years ago with the experimental psychology, which lived also at first only from the crumbs that fell from the table of other sciences—physics and physiology. It began also only with a few chance questions, with the threshold of sensations and reaction times; but since it works in its own workshops, for its own points of view and interests, it has conquered the whole realm of psychology. In the same way psycho-educational experiments will extend the work to all the functions active in education. Such new studies will show then, of course, how incomplete a sketch like this is and how many more relations still exist between the child and the study of mental life. But even this incomplete enumeration is sufficient to show at least one thing: the question whether there is a connection between psychology and education cannot be answered simply with yes or no, but must be answered by first, secondly, thirdly, fourthly—I do not discuss whether we can ever say also: lastly.

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II

CONTEMPORARY EDUCATION IN FRANCE[1]

The year 1897, like the year preceding it, brought no important change in the organization of public instruction in France. As I wrote in November, 1895, our heroic age in education came to an end some twenty years ago. Then foundation succeeded foundation, reform followed reform, and an intense effort was made to repair the weak places and to build up what was lacking in the past—to make good the aspiration of our country to be in the forefront of civilization. That period of great origination and of radical transformation naturally has been succeeded by one of step-by-step progress, of improvements of detail aiming at the completion and finish of an imposing structure.

A great event nevertheless has marked the year 1897; the organization of the universities created by the act of July 10 of the year before. Nothing would have been gained by the re-use of this great name of "university," as a mere decoration of our higher institutions of learning, had we been unable to adapt things to words; and, by the development of the instruction given by the several Faculties of law and medicine, of arts and sciences, by the multiplication of laboratories, by the enrichment of libraries, by the brilliant work and discoveries of professors, to call forth a new life and to awaken a fruitful activity. This story is told of our celebrated novelist Émile Zola: One fine morning, having hit upon the title of what was to be one of his most famous novels, he contented himself with writing the name in large letters on a piece of blank paper; and then took his ease the rest of the day. But on the morrow, he set to work, with his habitual earnestness, to write a book worthy of the title

[1] Translated from the author's manuscript by Frederic L. Luqueer, Ph. D., Principal of Public School No. 22, Brooklyn, N. Y.

he had chosen. In the same way, we have found—we have resuscitated—the fine old name of university, and have bestowed it upon our Faculties of instruction. But much remains to be done in order that this word may be fully realized—that our institutions of higher learning may, in truth, be schools of universal science, teaching all that may be taught, while, by their research and discovery, they constantly enlarge the patrimony of human knowledge.

Not all our universities—we count at this moment fifteen, and very shortly may count one more, for the University of Algiers is about to be created—not all our universities may claim an equal rank; for, it must be confessed, they have unequal resources. Some of them are but poorly endowed, and have but the two Faculties of arts and sciences. The University of Paris is without rival, with its great body of nearly 200 professors and 10,000 students. But some of the provincial universities, while not aspiring to the same high fortune, nevertheless will more and more grow to be—and are, already—important centers—focal points aglow with scientific activity and intellectual life. Among these are the Universities of Bordeaux, Nancy, Lille, Montpellier, and particularly, perhaps, the University of Lyons, which, situated in the second city of France, a city of 500,000 inhabitants, great because of its commerce and industries, has indeed some cause to be considered the second university of France.

Already there are indications that the recent act, which, in establishing the universities, gave them the right to receive gifts and legacies, will have an increasingly beneficial effect. We are doubtless far enough away from the princely donations of which you in the United States guard the secret. We have never met, on our path, a Leland Stanford or a Rockefeller. But, though we lack the magnificent generosity which has enabled you to raise from the ground, overnight, as if by magic wand, universities as rich as those of Palo Alto and of Chicago, we nevertheless have found, already, some benefactors, whose example is sure to be followed. At Lyons, a banker, M. Falcouz, has given to the university a sum of 100,000 francs, the interest upon which is used in

buying instruments for scientific research and in issuing reports or monographs upon literary and scientific subjects. At Nancy, those having to do with the industries of the place have subscribed about 400,000 francs to maintain courses in applied science, in electricity and industrial chemistry. The amount of this private generosity, without any doubt, will increase in proportion as our universities undertake practical instruction of immediate utility, which directly tends toward developing the economic wealth of the country. We are beginning to see that they should be more than merely professional schools, for the graduation of physicians, pharmacists, lawyers, professors—for the giving of diplomas that admit to liberal careers; more than schools of merely general theoretical science, in which each professor, as Mr. James Sully would say, "thinks himself to be upon the crest of the foremost wave of scientific thought." They have a duty beyond this. They must become a part, by the fitting effort they put forth, of the economic life of the city in which they are placed; and, by imparting technical instruction, by adapting their courses of study to local needs, increase the material prosperity of the city and of the nation.

It is in fulfilling this utilitarian part of their mission that the French universities will more and more deserve the sympathy of men of means, and will surely receive donations more or less considerable, enabling them to complete their equipment, to enrich their laboratories, and to multiply their courses. But, while expecting these private gifts of the future, our universities—remaining as they do state institutions—have even now, thanks to what they receive from the public funds, enough to live upon generously, and with honor to their name. Take, for example, the University of Lyons, to make clear the financial mechanism of our higher institutions of learning. To pay the salaries of the personnel,—full professors, conference leaders, fellows, directors, demonstrators, and assistants of every grade,—the University of Lyons receives annually from the state budget the sum of 840,000 francs; to meet material expenses—heating, lighting, additions to library, collections, laboratories, etc.—the sum of

170,000 francs; a total, in round numbers, of a million francs annually. Moreover, in accordance with the recent enactment, the university is free to make what use it pleases of its own resources, either for buildings, for new professorships, for acquisition of books, collections, or instruments needed by the students. Its own treasury receives all fees for matriculation, for study courses, and for library and laboratory work paid by the students, which for Lyons amount to about 200,000 francs; so that the total annual income of the university exceeds 1,200,000 francs,—and this not counting some 50,000 francs derived from local authorities, the Municipal Council, the General Council of the Department, the Chamber of Commerce, etc. Under these circumstances, a university may look toward the future with confidence; its to-morrow is assured, and it is strong to-day.

It will suffice, now, to consult the statistics of the number of French students, in order to form good augury for the destiny of our higher education. Germany, justly so proud of her twenty-two universities, counts only 28,000 students among her 52,000,000 of inhabitants. France, which has 34,000,000 at least, perhaps 38,000,000, gathered, in 1895--96, to her different Faculties 23,000 students; and it is to be remembered that this number does not include the students of our Catholic seminaries, while the enumeration of German students does include about 1500 students of Catholic theology. As regards law and medicine, it is to be noted that France has the numerical superiority: 8500 French medical students as against 7778 German students in 1895--96; 8035 French law students against 7742 German students. Perhaps we need not felicitate ourselves overmuch upon this showing; we would rather have the superiority in the other categories of students, those of arts and sciences. Here, unhappily, we fall below in arts (*lettres*) 3426 students in Germany, and about 2000 in France; in sciences 2813 in Germany, and only 1200 in France. In this last class, especially, we are sadly inferior.

There is another thing in which our French universities are lacking: a large contingent of foreign students; and it is a

little your fault, if, in this, we come far short of the German universities. Every year, for example, 500 young men from the United States jump, so to speak, over France to study in the universities of Germany—because, no doubt, of the merited renown of German science, but also because they can obtain there and carry back to their country, at the end of two or three years' work, a certificate officially recognizing their studies. In France, until very recently, we were not wise enough to offer equal facilities and advantages. But there has been a change with the new régime. One of the most important sections of the law by which we are ruled at present authorizes and urges the universities to establish, in the Faculties of arts and sciences, a new diploma granting the doctorate, the conditions of which they themselves regulate —a doctorate of the university, which does not confer, as does that of the state, the right to teach or practice in France, but which would make the pursuit of French studies more inviting to foreigners. The university of Paris has issued regulations and programmes for these new doctorates in arts and sciences, which without doubt will be much sought after. The universities of the provinces, notably that of Lyons, are about to follow this example. We are thus obeying the counsel given, in so many words, by some of your compatriots. At the last annual public session of the Institute of France, Professor Henri Moissan, in giving account of his visit of 1896 to the University of Chicago, recalled that Mr. Harper, president of that university, had said to him: "Why not modify your doctorate? We would send you good students. You know that young Americans are practical. They will not go to you unless they can return as doctors, and it is impossible for them to take your preparatory lycée or college course."

There has been little change in the organization of our elementary schools for several years. We strive merely to maintain against still active opposition, against the prejudice and stubborn resistance of the old parties, the liberal laws of the Third Republic, which opened elementary schools to all children and made attendance upon them obligatory.

But these laws do not assure instruction and education to the children beyond their twelfth year. For the immense majority of these children, the primary elementary school has, so to speak, no to-morrow. At twelve years most of our French children end their studies; the school in which they have learned the beginnings of human knowledge is closed to them; returned to their families, they enter at once upon apprenticeship and try to earn their livelihood. It is true that the upper elementary schools succeed in holding a certain number and in giving these additional moral and intellectual culture, from twelve to sixteen years; but it is a very small minority who profit by the advantages of this supplementary instruction. These upper elementary schools have a total register, from both sexes, of only 30,000 pupils, while the pupils in the primary elementary schools number about 5,500,000.

Here is a real break—a break grave and disquieting when we think of the moral future of the nation. From his leaving the primary school, at twelve or thirteen, to his entering the barracks, at twenty-one,—in the interval between the school life and the military life,—the youth is, as it were, abandoned to himself. Far from completing his education, he rather unlearns what the school has taught him. Above all, he is exposed to the pernicious influences of the street, to the contagion of every social evil. In an article published recently in the *Pedagogical seminary* Mr. Lancaster makes this statement: "Adolescence is the age in which dangers and risks of all sorts are much more frequent than in any other period of life." Adolescence is indeed a critical period, when the mental and moral nature is formed or deformed for all future existence. The memory of the good teachings received in the primary school is not enough to protect—against bad example without, against the promptings of nascent passion—the youth left to himself, and for whom a period of intellectual inertia and moral abandon follows the too short years of work at school. Happy they who suffer from this sharp breaking-off of their instruction and education nothing worse than a halt in their advancement, a knowledge

insufficient and incomplete. But how many others, alas! are the victims of the indifference shown them by a society that leaves them stranded thus early. No longer warmed and lighted by a fire regularly kindled, their intelligence becomes torpid, and their gentler sentiments hardened. There is not merely an arrest: there is a push back, and here many fall. Statistics—not of France alone—show this, in revealing the startling fact that, in our century of liberty and education, the criminality of the young is on the increase.

It would seem that our French democracy has at last become conscious of this dangerous situation, and is now endeavoring to work a remedy. For two years considerable effort has been made to develop the institutions supplementary to the school, to encourage what has been called post-scholastic work, to combat the ignorance and, so, the immorality—in part caused by ignorance—among those who have not had the good fortune to pursue a regular course of study in the upper elementary schools and in the institutions of secondary instruction. A society has been formed, already with excellent result, for reorganizing the courses for youths and adults, which had been allowed to languish, and for multiplying the public conferences or lectures—*les conférences populaires*,—which are something entirely new.

In 1894–95, the year in which the courses for adults began to increase after a long decadence, they numbered 8288 for the whole of France; in 1897 the figures rose to 24,528—of which 20,099 were for young men and 4429 for young women. The number has thus tripled itself in two years. Given almost everywhere, in the country as well as in the cities, these courses have been very popular. In 1897 there were more than 700,000 names registered, among whom were 409,481 faithful attendants—340,926 young men and 68,555 young women. And there is every hope that this happily progressive movement will persist in the years to come.

What is remarkable in this flourishing condition of the *cours d'adolescents* is that it is due not to compulsory law, enacted and imposed by the state, but to the almost spontaneous initiation of the teachers, men and women, of the ele-

mentary schools, who have benevolently assumed this added care. The adult courses are given in the evening, since it is then only that those who attend, work-people of city and country, are free to study; and the schoolmasters, who themselves also have had their day's work, re-open their classrooms, and add to the taxing strain of the day's lessons the supplementary task of night teaching. Doubtless the state encourages them; they receive from their superiors letters of congratulation and sometimes also honorary distinction and award. But, to the present at least, the reward has been more in honors than in money. The state pays almost nothing for these adult courses. It has put upon the budget for this work only the petty and insignificant sum of 130,000 francs. And although the municipalities are a little more generous, the 1,200,000 or 1,300,000 francs granted in 1897 by communal budgets are utterly inadequate as a recompense to the 25,000 professors, especially as a large part of this one million is used for the material expenses of the courses, heating, lighting, etc. The zeal displayed by the instructors has thus, up to the present, been no less disinterested than intelligent and warm. Those who have been paid have received but a small amount; and some there are who have received nothing. And even—as we learn from the reports upon *l'Éducation populaire* of Professor Édouard Petit, who is the appointee of the Government to direct the movement of adult education throughout France—it has happened that more than one instructor have had to meet from their own purse the expense of heating and lighting their classrooms.

This earnestness and enthusiasm are evinced not more by the instructors than by the attendants upon the courses. If auditors have come in throngs, they have done so voluntarily: no legal obligation forces them. It is touching to see in the country, on cold winter evenings—by obscure ways, muddy or icy,—these seekers after instruction hastening toward the school,—toward the little light enkindled there, toward the knowledge that calls to them. This indeed shows that the early lessons of childhood have not been lost and that, while the elementary school has not had the time to teach its pupils

all the knowledge needed, it nevertheless has implanted in them a desire to know more. In the city, attendance upon the adult courses is no less praiseworthy, from another point of view: doubtless it is there much easier to reach the evening school, only a few streets having to be traversed; but, on the other hand, distractions and seducing pleasures abound, inviting the young from the straight road: the *cabarets* are no mean rival of the *cours d'adults!* So that the apprentices of the great city deserve praise no less than the youths of the country when they choose the way schoolward. Moreover, they are encouraged in this laudable desire to gain further instruction by their parents, who everywhere appreciate the advantages of this new form of intellectual and moral education. M. Édouard Petit, in his last report, cites the example of a mother, a poor old villager, who offered to take her son's place on the farm, and to do his work so that he might take the evening lessons!

The instruction given in these adult classes, furthermore, is of a nature to justify the eagerness of those who attend. Although there has been no regular course or plan mapped out beforehand, and perfect freedom has been granted in the making-out of programmes, an instinctive appreciation of the needs of the young breadwinner has made instructors almost everywhere choose the same subjects, practical and of immediate utility. It has been necessary, it is true, in the first place, to give simple courses in reading and writing: for, notwithstanding education is legally compulsory, we have still in France young persons who are illiterate. Nor have we neglected to review the staple subjects of elementary instruction. But, generally, it is not thought to be enough to re-instruct pupils from fifteen to eighteen years of age in the subjects taught them while they were between six and twelve. The effort is made to enlarge the circle of their knowledge by introducing subjects bearing upon the industries and commercial activities of the place. In the country, practical courses have been given in carpentry, upon rural law, upon all phases of agriculture; in the city, upon common law, in bookkeeping, in industrial drawing, and the like. The young

women have been offered special courses in hygiene, in domestic economy, in dressmaking, and in cooking. In a word, without relinquishing the general aim of a more advanced intellectual culture and of a higher level of morality, the instructors of the adult classes have been careful to adapt their courses to the needs of pupils already engaged in industrial or agricultural work, and to respond to the technical and professional demands of our varied modern activity.

These adult courses, although in session but three evenings a week during a few months, still have the character of regular classes. The pupils take notes and fill their exercise books, which they already look forward to exhibiting in the World's Exposition of 1900. It is quite otherwise with that second institution of popular instruction to which we have given the name of Conferences. These are not meant for young people alone, they are meant for all. There is no set programme, but the leaders, at pleasure, take up questions most diverse, the simplest and the most complex, in short, any subject of popular educational interest. The success of these conferences has been great. In 1894--95 there were held, throughout France, 10,379; in 1896--97 their number increased to 97,313.

Here, again, the schoolmasters were the first to give themselves to the work. But they have found co-laborers among all classes of society; and, more and more, educated men who have something useful to teach their fellows are seeking the honor of having their names added to the roll of the educators of the nation. Professors of lycées and colleges, of normal schools and of universities, physicians, lawyers, and sometimes workmen and merchants have joined hands with the school instructors in carrying on these educational meetings in town and country. Students of the universities also have often devoted their youthful science to the service of the people's conferences—following in this the advice given by M. De Vogüé in speaking to the students of Paris: 'To those who have labored all the day with tools, you will give something of thought, something of vision, to enrich the night. And you, on your part, will learn to know the silent world of hand

toilers, and how their minds may be interested and their hearts won."

In these popular conferences or lectures, where the auditors, if they are to be held, must needs be diverted and amused while being instructed, recourse is often had to the stereopticon; that is to say, photographic views are shown to captivate the attention, and these are accompanied by explanatory and instructive comment. Of the 100,000 lectures of 1897, nearly one-half have been illustrated with projections. Various societies—*La ligue française de l'enseignement, la société de l'enseignement par l'aspect*, centered at Havre, *Le musée pédagogique*, of Paris—have undertaken to supply views to the provincial conferences. Moreover, the Minister of Public Instruction sends from place to place the apparatus for these illustrated lectures, so that the "magic lantern," as it is called, goes from village to village, even in the most out-of-the-way corners of France. In addition, *La société nationale des conférences populaires*, established in Paris in 1890, sends to anyone who asks printed models of conferences, composed with great care by competent writers; so that the veriest novice of a speaker, inspired by these texts, or at need, by simply reading them aloud, may provide an agreeable and useful hour for an audience on its part not unsympathetic nor over-critical.

Neither politics nor religion are discussed in these meetings; but, with the exception of these necessarily excluded subjects, it may be said that the thousands of lectures held in 1897 have touched upon all topics of literature, of ethics, of history and geography, and of theoretical and applied science that could interest the people. Questions of the day—French colonization, Tonquin, Madagascar, the Franco-Russian alliance, the Greco-Turkish war—have been appreciatively studied. Finally, a veritable crusade against alcoholism has been begun—a crusade sadly needed, alas! because of the plague's progress, the ravages of which are nowhere more evident than in France. At the last Geneva Exposition, the idea was hit upon of representing the relative amounts of alcohol consumed by the various countries of

Europe by flasks of differing size. That of France was the largest—unenviable distinction! We fervently hope that at the approaching exposition, if recourse is had to the same illustration, our flask will be very much smaller. If the popular conferences but brought about this result they would deserve the public gratitude, in addition to what is due them for all the other services they have rendered, and are rendering, the cause of general education.

Among the publications of interest to the friends of education in every land are those, already mentioned, of M. Édouard Petit. I must name also the great work which M. Émile Levasseur, the geographer and statistician, devotes to the elementary education of the civilized world—*l'Enseignement primaire dans les pays civilisés.* This compact volume of more than six hundred pages is a marvel of profound research, minute and exact. In France we have had nothing like it. In other countries, it is only the annual publications of your Bureau of Education at Washington that, as regards abundance of material and value of tabulated results, at all equal this work of our compatriot. But the documents issued by Dr. Harris, in his voluminous reports, are neither co-ordinated nor complete. The work of M. Levasseur, on the contrary, is most methodical and surveys the entire field. It is the first time, we believe, that there has been given us a complete account of the condition of elementary education in all lands in which it has been established.

The author, while not altogether refraining from general views and discussions of principle, has chiefly taken the point of view of the statistician. By the tables of figures, covering long series of years, he shows us the results achieved, the progress made by every sort of elementary school. In addition, to explain the multitude of figures and to give them true significance, he has sketched the history of primary instruction for each nation, treating of the means of financial support, and of the administrative system with the laws regulating it; so that the chapters form a luminous exposition of the growth of schools among the several nations, from the first attempts and origins to their most recent developments.

And, beyond the historical and documentary interest of the facts presented, it is evident that they may, through the comparison they provoke, inspire ideas of reform, giving to the less advanced countries methods new and better.

Of the various chapters, those which M. Levasseur has made fullest and richest are, first,—it goes without saying,—that on France; next, the one on Prussia, which he has studied with greatest care; and, finally, the chapter devoted to the United States, which, in so many ways, surpasses us in its educational institutions. M. Levasseur, who visited America and who, as is known, brought back with him invaluable information regarding the material and moral condition of its workingmen, familiarized himself not more with the factories and shops of the United States than with its schools. We have but one regret; and that is that, in giving the sources of information, he has not mentioned, with the report of M. Ferdinand Buisson upon the Philadelphia Exposition of 1876, the report by M. Benjamin Buisson, published in 1894, upon the World's Fair at Chicago.

This book of M. Levasseur is valuable not alone because of its splendid array of educational statistics. Its general statements also are of the highest significance. M. Levasseur does not hesitate to say that the organization of elementary instruction is one of the greatest achievements of the nineteenth century. Doubtless the century now drawing to a close might have many names. We might, in history, call it "the century of the railroad," or the "century of electricity." But it would be unjust to withhold the honor of naming it also "the century of elementary education." Without at all forgetting preceding centuries, it must be admitted that it is only within the last hundred years that elementary instruction has been adopted by the state—been made one of the essential functions of public power, has been organized, systematized, and has conquered little by little the entire world.

In 1801 Holland enacted laws for the advancement of popular education. Bavaria established compulsory education in 1802; Prussia followed her example in 1819. From 1830 to 1845 the Swiss cantons, and Sweden also, created

their schools. During the same period, by the law of 1833, France organized an educational system; and England voted the first appropriation for primary schools—though it was only much later, in 1870, that a law of organization was passed. It was at this time, too, that—led by your illustrious countrymen, Horace Mann and Henry Barnard—you established your public schools; and, following your example, Canada, the English colonies, and the South American republics successively built up their educational institutions. United Italy adopted in 1859 the law of Piedmont. Two years before Spain had enacted a similar measure. In less than a hundred years, it is as if light had encompassed the earth. Almost everywhere the law has spoken, no longer abandoning instruction to private initiation or to the action of the various churches. In Oceanica, in Africa, in Asia, the example of old Europe and of young America has been followed—at times, as in Japan, with admirable result. Since 1860 Japan has pressed earnestly along the way of modern civilization. It has created a complete system of instruction; and in 1892 it could count nearly 25,000 schools, with 600,000 teachers and more than 3,000,000 pupils.

We are justified, then, in calling, with M. Levasseur, our century "the century of elementary instruction," and in rejoicing with him in the fact. Doubtless, popular education is not the remedy for all the ills humanity suffers and will suffer. None the less, we hail it as one of the greatest blessings, if not the greatest of civilization. "Its attendant disadvantages," writes M. Levasseur, "are seen to be relatively very small, when, taking all into account, we measure the grandeur of the work. We may say without hesitation that elementary instruction has been, in sort, a redemption of humanity. Freely distributed by the community, it is one of the brightest illustrations, and truest, of social solidarity. . . The mid-point of the twentieth century will express surprise that the nineteenth could have had misgivings as to the wisdom of public instruction; but it will be grateful for the final stand taken, and the democracy of that day, which the schools will have helped to form, will certainly not be unthankful."

GABRIEL COMPAYRÉ

UNIVERSITY OF LYONS, FRANCE

III

THE USE OF HIGHER EDUCATION [1]

I have thought it would be appropriate on this occasion, when we celebrate the completion of a quarter-centennial by this young and vigorous university, to ask your attention to the subject of higher education and its function in preserving and extending our civilization.

Young as it is, Boston University has beheld greater changes in higher education within the epoch of its life than have been seen in any previous quarter-century since the Middle Ages.

What with the extent of our public elementary schools and the continual instruction derived throughout life from newspapers, magazines, and books, we seem to have a population of self-educated men and women. One would expect a relative decrease of attendance on the college and university. He who runs may read, and certainly the hours of leisure from business are sufficient to make the habitual reader a learned man by the time he crosses the meridian of life. In a national career full of opportunities we should expect a growing impatience of long school terms. Eight years in the elementary schools followed by four years in secondary schools, and then four years at college followed by a three-year term of postgraduate study—how can the American youth be made to undertake so much?

It is a complete surprise for us to learn the actual statistics in regard to the schooling of our people.

In 1872, the year before the founding of Boston University, the records of higher education show for the entire nation an enrollment of 590 students in each million of inhabitants—a

[1] The University Convocation address, delivered at the quarter-centennial of Boston University, May 31, 1898.

little more than one college student, on an average, for each community of two thousand population.[2]

Not only did the growth of schools for higher education keep up with the growth in population, but the enrollment increased year by year until in 1895 (twenty-three years later) instead of 590 students we had 1190 in each million. The quota had doubled, and it has since increased. And it is the more surprising when we call to mind the fact that the standard of admission to the Freshman class has been placed much higher. The élite colleges have followed the lead of Harvard for twenty-five years, and their requirements for admission demand nearly two years more than was needed fifty years ago. Even the colleges that have resisted the tendency to raise standards of admission have been obliged to yield, some more and some less. Considering the amount of work counted as higher education fifty years or even twenty-five years ago and now performed by high schools and academies, we are right in affirming that the quota receiving higher education in each million of people is three times as great as twenty-five years ago, when Boston University was founded.

But it is not numbers alone that have changed. The work performed in higher education has changed still more. In fact it is now in process of unfolding a second phase of work quite as important as that which it has performed since the beginning. To a course of study for culture—the so-called course in philosophy, the academic course in the humanities and mathematics—it has been in process of adding a course of three years of special work in the laboratory or in the seminary—the student choosing his narrow field and concentrating on it his entire attention for three years and at the end receiving a doctor's degree. This second part of the course of study in the university is a discipline in original investigation.

The student in his elementary, secondary, and the first part of the higher course of study, has been in search of culture. He has mastered one by one the several branches of human learning in their results and in the elements of their methods

[2] See Appendix I

(but certainly not in their working methods, their practical modes of investigation). Now in the second part of higher education the student selects a small field and masters it practically, not merely learning what others have done in it, but pushing his research into new fields until he can say with assurance, I have made new discoveries in a limited field of human endeavor and am become to a small extent an original authority.

Certainly this doubles the value of higher education although the new field, the field of specialization, is in no sense a substitute for the other field, that of the mastery of the lessons of human learning.

Within the short period between 1872 and 1897, the quarter-centennial of Boston University, we have seen the feeble infancy of the method of original investigation grow to a sturdy youth. The next quarter-century—and may it be as prosperous as the one just completed for this institution and for its kindred—the next quarter-century will see the youth come to a vigorous manhood and vast numbers of young men and women undertake the special investigations necessary to solve problems arising in our civilization—problems relating to material environment and problems relating to the adjustment of social, political, and international problems.

The number of students reported as engaged in post-graduate work in all our colleges and universities in 1872 was only 198. This has increased steadily, doubling once in five or six years, until in 1897 the number reached 4919. From less than 200 the post-graduates have increased to almost 5000. They are twenty-five times as numerous now as at the time Boston University was founded.[3]

Professional students, too, have increased. The number studying law, medicine, and theology in 1872 was only 280 in each million of inhabitants. In 1896 the 280 had become 740 in the million.[4]

In the same quarter of a century scientific and technical schools have multiplied. In the seven years from 1890 to 1896 the number of students in engineering and applied sci-

[3] See Appendix II

[4] See Appendix III

ence increased from 15,000 to nearly 24,000 (14,869 to 23,598).[5]

In the first days of higher education it was naturally believed that only the professional schools for law, medicine, and divinity needed a preparation in the college course. Now it is beginning to be seen that the most practical occupations, those for the procurement of food, clothing, and shelter, as well as those for the direction of social and political life, need also the studies that lead to the A. B. degree as well as the specializing post-graduate studies that lead to original combinations in industry and politics.

Post-graduate work as it was in 1872 had not fully seized the idea of original investigation. There was a dim idea that higher education should end as it had begun, namely, as a system of set lessons with text-books and recitations—post-graduate work should be a continuation of undergraduate work. The idea of the laboratory for experiment and research and of the seminary and library for original investigations in history, politics, archæology, and sociology, has developed within that time for us.

Other nations (one thinks especially of Germany) have had this for a longer period. The significance of this precious addition to our system of education will become clear if we go over for ourselves some of the grounds which make higher education more useful and productive than elementary and secondary.

There is something specific in higher education, as it exists in the college, which gives an advantage to its graduates in the way of directive power over their fellow-citizens. Elementary education is a defective sort of education, not merely because it includes only a few years of school work, but because its methods of study and habits of thought are necessarily crude and inadequate.

The elementary course of study is adapted to the first eight years of school life, say from the age of six to that of fourteen years. That course of study deals chiefly with giving the child a mastery over the symbols of reading, writing, and

[5] See Appendix IV

arithmetic, and the technical words in which are expressed the distinctions of arithmetic, geography, grammar, and history. The child has not yet acquired much knowledge of human nature, nor of the world of facts and forces about him. He has a tolerably quick grasp of isolated things and events, but he has very small power of synthesis. He cannot combine in his little mind things and events so as to perceive whole processes. He cannot perceive the principles and laws underlying the things and events which are brought under his notice. He consequently is not able to get much insight into the trend of human affairs, or to draw logical conclusions from convictions or ideas.

It is a necessary characteristic of primary or elementary instruction that it must take the world of human learning in fragments and fail to give its pupils an insight into the constitution of things. Let anyone who claims the most for the elementary methods of instruction say whether his pupils at ten years old are capable of such a comprehensive grasp of any subject as will become possible after four years more of good teaching. Let the ardent believer in scientific method say whether the child can learn at twelve years to make allowance for his personal equation and subtract the defects of his bodily senses from his inventory of facts of nature. Is it to be expected that a child can free himself from prejudices, not to say superstitions, at that age; and that he can discriminate between what he actually sees and what he expects to see? It is somewhat better in the ages fourteen to eighteen.

The education of high schools, academies, and preparatory schools—what American writers call secondary schools—begins to correct this inadequacy of elementary education. The pupil begins to see things and events as parts of processes, and to understand their significance by tracing them back into their causes and forward into their results.

While elementary education fixes on isolated things, secondary education deals with the relations of things and events in groups. It studies forces and laws, and the mode and manner in which things are fashioned and events accom-

plished. To turn off from occupation with dead results and to come to the investigation of the living process of production is a great step.

Where the pupil in the elementary school studies arithmetic and solves problems in particular numbers, the secondary pupil studies algebra and solves problems in general terms, for each algebraic formula is a rule by which an indefinite number of arithmetical examples may be worked out. In geometry the secondary pupil learns the necessary relations which exist between spatial forms. In general history he studies the collisions of one nation with another. In natural science he discovers the cycles of nature's phenomena. In acquiring foreign languages he studies the variations of words to indicate relations of syntax; he becomes acquainted with the structure of language, in which is revealed the degree of consciousness of the people who made it and used it. Language reveals all this, but not to the youth of sixteen. He gets some glimpses, it is true, but it will take years for him to see as a consistent whole the character of a people as implied in its mode of speech. For to do this he must be able to subtract his personal equation again. He must be able to see how things would seem to him if he did not think them in the highly analytic English tongue, but in a language with inflections like Latin, Greek, or Sanskrit; in a language like the Chinese, where even the parts of speech are not clearly differentiated and no inflections have arisen.

But the most serious defect of secondary education is that it does not find a unity deep enough to connect the intellect and will. Hence it does not convert intellectual perceptions into rules of action. This is left for higher education. A principle of action is always a summing up of a series. Things and events have been inventoried and relations have been canvassed; the results must now be summed up; the conclusion must be reached before the will can act. If we act without summing up the results of inventory and reflection, our act will be a lame one; for the judgment will remain in suspense.

We may contrast elementary education and secondary edu-

cation with the education that comes to the illiterate from experience. He may as a locomotive engineer know all the safe and all the dangerous places on his road. He may know every tie and every rail, but in this he knows only one or two processes and their full trend. He is limited by his own individual observation. The man of books, on the other hand, has entered into the experience of others. Books have given him a knowledge of causes. He can explain his particular experience by carrying it back to its cause. In the cause he sees a common ground for the particular fact of his experience and also for the endless series of facts really present only in the experience of other men, present and past, and only possible for his experience in an endless time.

Thus even elementary and secondary education, though inferior to higher education, lift up the boy or girl above the man or woman educated only in the school of experience. They have attained that which will grow into a much broader life. They will be able to interpret and assimilate vast fields of experience when once they encounter them in life; while the illiterate is quickly at the end of his growth, and what he has learned will not assist him to learn more.

This relation of illiterate experience to elementary-school education helps us to understand the defect of elementary as compared with secondary and secondary as compared with higher education.

It is the glory of higher education that it lays chief stress on the comparative method of study; that it makes philosophy its leading discipline; that it gives an ethical bent to all of its branches of study. Higher education seeks as its first goal the unity of human learning. Then in its second stage it specializes. It first studies each branch in the light of all others. It studies each branch in its history.

A good definition of science is that it unites facts in such a way that each fact throws light on all facts within a special province and all facts throw light on each fact. Nature is first inventoried and divided into provinces—minerals, plants, animals, etc., geology, botany, zoölogy. Thus secondary education deals with the organizing of facts into subordinate

groups, while higher education undertakes to organize the groups into one group.

The first part of higher education, that for the B. A. degree —as we have said already—teaches the unity of human learning. It shows how all branches form a connected whole and what each contributes to the explanation of the others. This has well been called the course in philosophy. After the course in philosophy comes the selection of a specialty; for there is no danger of distorted views when one has seen the vision of the whole system of human learning. Higher education cannot possibly be given to the person of immature age. For the youthful mind is immersed in a sea of particulars. A college that gave the degree of bachelor of arts to students of eighteen years would give only a secondary course of education after all, for it would find itself forced to use the methods of instruction that characterize the secondary school. It would deal with subordinate groups and not with the world view. The serious tone of mind, the earnest attitude which inquires for the significance of a study to the problem of life, cannot be formed in the normally developed student from fourteen to eighteen years of age. But at eighteen years of age the problems of practical life begin to press for solution. This in itself is a reason for the demand for philosophy, or for a measure that may settle for the student the relative value of each element of experience. The youth of proper age to enter on higher education must have already experienced much of human life, and have arrived at a point where he begins to feel the necessity for a regulative principle, or a principle that shall guide him in deciding the endless questions which press upon him for settlement. He must have begun to ask himself what career or vocation he will choose for life.

Taking the youth at this epoch, when he begins to inquire for a first principle as a guide to his practical decisions, the college gives him a compend of human experience. It shows him the verdict of the earliest and latest great thinkers upon the meaning of the world. It gives him the net result of human opinion as to the trend of history. It gathers into

one focus the results of the vast labors of specialists in natural science, in history, jurisprudence, philology, political science, and moral philosophy.

If the college graduate is not acquainted with more than the elements of these multifarious branches of human learning, yet he is all the more impressed by their bearing upon the conduct of life. He sees their function in the totality, although he may not be an expert in the methods of investigation in any one of them.

For the reason that higher education makes the ethical insight its first object, its graduates hold the place, in the community at large, of spiritual monitors. They exercise a directive power altogether disproportionate to their number. They lead in the three learned professions, and they lead in the management of education of all kinds. They correct the one-sided tendencies of elementary education, and they furnish the wholesome centripetal forces to hold in check the extravagances of the numerous self-educated people who have gone off in special directions after leaving the elementary school.

Dr. Charles F. Thwing, President of Western Reserve University, a few years ago was at the pains to hit upon a novel method of comparing the college graduate with the rest of society. He took the six volumes of Appleton's *Cyclopedia of American biography* and counted the college graduates in its list of over 15,000 names. A little more than one-third of all were discovered to be college men. A safe inference was that one out of ten thousand of the population who have not had a college education training has become of sufficient note to be selected for mention in a biographical dictionary while one out of each 40 of our college men finds his place there. The chance of the college man as compared with the non-college man is as 250 to 1 to become distinguished as a public man of some sort—soldier, naval officer, lawyer, statesman, clergyman, teacher, author, physician, artist, scientist, inventor—in short, a man with directive power of some kind, able to combine matter into a new and useful form, or to combine

men in such a way as to reconcile their differences and produce a harmonious whole of endeavor.

We have already explained that the person who has merely an elementary schooling has laid stress on the mechanical means of culture—on the arts of reading, writing, computing, and the like. He has trained his mind for the acquirement of isolated details. But he has not been disciplined in comparative studies. He has not learned how to compare each fact with other facts, and still less how to compare each science with other sciences. He has not inquired as to the trend of his science as a whole, nor has he asked as to its imperfections which need correction from the standpoint of other sciences. He has not yet entertained the question as to its bearing on the conduct of life.

We would say of him that he has not yet learned the difference between knowledge and wisdom; he has not learned the method of converting knowledge into wisdom; for it is the best description of the college course of study to say that its aim is to convert knowledge into wisdom—to show how to discern the bearing of all departments of knowledge upon each.

Again, considering the permanent effects on the intellectual character, it is evident that the individual who has received only an elementary education is at great disadvantage as compared with the person who has received a higher education in the college or university, making all allowances for the imperfections of existing institutions. The individual is prone to move on in the same direction and in the same channel that he has taken under the guidance of his teacher. Very few persons change their methods after they leave school. Hence the importance of reaching the influence of the method of higher education, the method of original investigation, before one closes his school career.

It is easy to enumerate the influences of the university and see their great transforming power. Its distinguished professors, its venerable reputation, the organization of the students and teaching corps into an institutional whole, the isolation of the student from the strong ties of the home and the

home community—all these, taken together, are able to effect this change in method when brought to bear upon a young man for four years. He acquires an attitude of mind which we have already described as critical and comparative. It is at the same time conservative. He has learned to expect that the existing institution may have deeper grounds for its being than appear at first sight; while, on the other hand, the mind trained in elementary and secondary methods is easily surprised and captivated by superficial considerations and has small power of resistance against shallow critical views. It is easily swept away by a specious argument for reform, although we must admit that the duller, commonplace intellect that has received only an elementary education is apt to follow use and wont and not question the established order. It is the brighter class of minds, that stop with the elementary school, which become agitators in the bad sense of the term. The restless and discontented class of people, those who mistake revolution for reform, are recruited from the elementary ranks. But the commonplace intellect has no adaptability, or at least small power of readjustment, in view of new circumstances. The disuse of hand labor and the adoption of machine labor, for instance, find the common laborer unable to substitute brain labor for hand labor, and keep him in the path of poverty wending his way to the almshouse.

Our numerous self-educated men, of whom we are so proud, are quite apt to be persons who have never advanced beyond elementary methods. Very often they are men of great accumulations in the way of isolated scraps of information. They have memory pouches unduly developed. They lay stress on some insignificant phase of human affairs. They advocate with great vigor the importance of some local center, some partial human interest, as the chief object of all life. Not unlike them is the astronomer who opposes the heliocentric theory, and favors the claim of some planet or some satellite as the true center.

This is the crying evil with the dominance of elementary education and our swarms of self-educated men. They take the primary view of all things, and this is of necessity a

distorted view. Their theory supposes, innocently enough, that the immediate view of things shows them as they truly are. It looks at the present object out of its historic connection and fancies that it knows it, without taking into consideration the process by which it has been generated and come to be what it is. All college or university work—even the poorest specimens of it—deals more or less with the genesis of things—with their process of becoming—and sets the student into a habit of mind which is dissatisfied with the immediate aspects of things and impels him to go at once behind them to causal processes and seek to find what states and conditions preceded, and how the changes were wrought, and exactly why we have things as they are. It gets to understand the trend of things and can tell, prophetically, what is likely to come next.

This primary view of the world adopted by so many of our self-educated men—I admit them to be men of great merit, so far as good intentions and persistent industry are in question—explains why so many of these men are men of hobbies, or "fads" as they are called in the slang of the day. A hobby or fad is some fragmentary view of the world set up for the central principle of all things. It has been stated that a man with a hobby does not see his favorite subject in its just relations—does not comprehend its process of origination nor see how it implies the existence of other things. He does not understand the interdependence of all things. In contrast to him stands the old-time graduate of college, before the admission requirements had been raised. He received the first part of higher education, the culture side of it, as he does now. It gave him his view of the world. It is true that the family and the Church give to the child his view of the world, but they omit the logical connections. The child does not think out the results nor see their grounds; nor does he apply that view of the world as a measuring rod to the branches of knowledge.

Let me conclude this address by a summary of the views presented. In the college the pupil has the thought of his civilization presented to him as a practical guiding principle.

He meets it in every recitation room and in the general conduct of the institution. He finds himself in association with a large number of students all occupied upon this work of learning the regulative principles not only of human conduct but also of the world of knowledge.

The lawyer, after working years and years over his cases, comes by and by to have what is called a "legal mind," so that he sees at a glance, almost as by intuition, what the law will be in a new case. So, in the four years of college undergraduate life, the student gets an insight which enables him to decide immediately a phase of the problem of life. He forms a habit of mind which inquires constantly of each thing and event: How does this look in the light of the whole of human learning? What is the "good form" which the consensus of the scholars of the world has fixed for this? He learns at once to suspect what are called "isms" and universal panaceas as one-sided statements. The wisdom of the race begins to form a conscious element of his life.

While the first part of higher education gives this general insight into what is good form in view of the unity of human learning, the second part—that which teaches methods of original investigation—should be made accessible to all students of colleges and universities. For this purpose endowments are needed, first in the forms of fellowships which will enable the student to live comfortably while he is preparing himself for his doctor's degree. A second kind of endowment may promote research and take the form of prizes for special investigations.

The laboratories and seminaries of this post-graduate course may and do take up the practical problems of the life of the people. These are capable of immense benefit in sociology and politics, to say nothing of the industries of the people, rural and urban. The entire civil service of the United States should find employment for experts armed with methods of original investigation and with the readiness and daring to undertake the solution of problems which offer themselves perpetually in our civil life. The town council, the board of public works, the various directive powers which

manage the affairs of the State and municipality are in constant need of light, and the student of the post-graduate department of the university is the person needed to furnish by his special studies the aggregate result of the experience of the world in answering these practical and theoretical wants. In a country studying ever new political questions and questions in sociology, the student who obtains his Doctor's degree from the post-graduate course can apply his knowledge, and apply it rationally, without losing his self-possession.

Since 1880, when our census showed a population of more than fifty millions, we have ascended above the horizon of the great nations of Europe.

Henceforth we have a new problem, namely to adjust ourselves to the European unity of civilization. It is absurd to suppose that the problems of diplomacy which will arise in our relations to the states of the Old World can be solved by minds untrained in the university. For it is higher education which takes the student back to historic sources and descends from national beginnings, tracing the stream of events to the various points at which modern nations have arrested their development. Successful diplomacy is not possible without thorough knowledge of national aspirations and their historic genesis.

It is almost equally important that our home problems, social and political, shall be studied by our university specialists. Perpetual readjustment is before us. There is the new aristocracy of wealth struggling against the aristocracy of birth. To both is opposed the aristocracy of culture, the only one that is permanent. All may come into the aristocracy of culture, but it requires supreme endeavor on the part of the individuals.

With the great inventions of the age we find ourselves all living on a border land. We are brought into contact with alien nationalities and alien forms of civilization. We are forever placed in antagonism with some environment, material or spiritual, and our endeavor must perforce be to effect a reconciliation—to unite the conflicting ideas in a deeper one that conserves what is good in each. There is

no other recourse—we must look to higher education to furnish the formulæ for the solution of the problems of our national life.

We accordingly rejoice in the fact of the increasing popularity of the university in both of its functions—that of culture and that of specialization.

WILLIAM T. HARRIS

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APPENDIX I—Number of college students to each 1,000,000 persons in the United States (excluding professional and technical students, but including post-graduate students).

1872	590
1873	740
1874	760
1875	740
1876	720
1877	710
1878	790
1879	780
1880	780
1881	760
1882–83	740
1883–84	750
1884–85	760
1885–86	700
1886–87	710
1887–88	710
1888–89	750
1889–90	880
1890–91	930
1891–92	1020
1892–93	1080
1893–94	1140
1894–95	1190
1895–96	1220
1896–97	1210

APPENDIX II—The following table shows the number of post-graduate students in the universities and colleges of the United States each year for twenty-five years: (these are included in Appendix II).

1871–72	198
1872–73	219
1873–74	283
1874–75	369
1875–76	399
1876–77	389
1877–78	414
1878–79	465
1879–80	411
1880–81	460
1882–83	522
1883–84	778
1884–85	869
1885–86	935
1886–87	1237
1887–88	1290
1888–89	1343
1889–90	1717
1890–91	2131
1891–92	2499
1892–93	2851
1893–94	3493
1894–95	3999
1895–96	4363
1896–97	4919

APPENDIX III—Number of professional students to each 1,000,000 persons in the United States.

1872	280
1876	380
1881	440
1885–86	450
1890–91	570
1895–96	740

APPENDIX IV—Students in scientific and technical courses in the United States.

1889–90	14,869
1890–91	15,586
1891–92	17,012
1892–93	20,329
1893–94	23,254
1894–95	24,055
1895–96	23,598

IV

THE OLDER AND THE NEWER COLLEGES[1]

I have received no special mandate to express the sentiments with which other colleges and universities participate in this auspicious festival; but I think I know how the elder American institutions of the higher learning now look upon the birth and fortunate youth of a kindred institution, and that I can interpret some of the grounds of these elders' good wishes.

Many American colleges have been founded under circumstances which made manifest at the start strong antagonisms in theological or social opinions and practices between the pre-existing and the newer institutions; but no such antagonisms or oppositions have been encountered by Boston University. The educated community has learned that the cause of all institutions of higher education is in reality a common cause to be promoted by the hospitable greeting of newcomers to the field, and by cordial co-operation between the different institutions which partially occupy that field. It has learned that the common cause is weakened by public strife between different colleges and universities, and even by covert attacks on one another's methods and policy. Not more than twenty-five years ago the habitual attitude of the New England colleges toward each other could be correctly described as an armed watchfulness, which naturally and easily passed over at not infrequent intervals into a state of active hostility. The denominational quality of the colleges and the severity of denominational antagonisms led to bitter criticism each of the other, which was all the worse in its effects because conscientious and founded on serious convictions. Gradually this state of suppressed warfare between colleges has passed away

[1] An address delivered at the quarter-centennial of Boston University, June 1, 1898.

with the denominational intensity which was its principal cause.

It may be asked, however—can existing colleges and universities really welcome with sincerity a new college or university to the limited field of the higher education? They can, and they do; though of course the creation of new institutions might in a given community be carried too far. To determine beforehand this limit of fruitful creation requires, it must be confessed, a wisdom at once cautious and sanguine. In organizing education the bold experiment often succeeds where a timid one would have failed. For example, one would not have supposed that three medical schools, each connected with a college or university, could be successfully carried on in Boston; and yet three such schools are in full career, each renders a valuable service to the community, and because these diverse institutions exist here, Boston is a more influential medical center than it would be if there were but one medical school instead of three.

It often happens that institutions of education carried on by different bodies of trustees, and varying in regard to age, constitution, and methods, bring about in the community a greater diffusion of the higher education than would otherwise be accomplished. This kind of public service Boston University has illustrated during the first twenty-five years of its life, although established, or rather because established, in close proximity to Harvard, Tufts, and the Institute of Technology.

The founding and development of Boston University are due in the first instance to the Methodist Episcopal Church—a great denomination in our country as regards numbers, wealth, and general effectiveness. The brief history of the University demonstrates the extraordinary change which has taken place in the real management of institutions of denominational origin. For more than a century in the early history of Harvard College every person connected with the institution as governor or teacher had to be connected with what was then the established Church of Massachusetts. That a single Baptist should be a teacher in Harvard was an intoler-

able scandal. In the Roman Catholic colleges of to-day every governor and teacher must be a member of that communion; but in the colleges of the large Protestant denominations denominational management no longer means necessarily this invariable consignment of the students to teachers connected with one denomination. On the catalogues of Boston University are found the names of teachers and administrative officers belonging to a great variety of denominations; and I need not say that students of every possible mode of religious thought have always been welcomed to its halls. A great gain in religious toleration is recorded in this striking change in the management of Protestant denominational institutions of the higher education.

I must further felicitate Boston University on the reflex influence which an establishment of the higher learning, so conducted, has on the denomination which gave it birth. Although the founders of Methodism were men of thorough education, it came about in process of time that the denomination attached less importance to learning in its ministers and teachers than to other qualifications. Nevertheless the foundations of this university were laid on a pre-existing theological school, where men were trained for the ministry of the Methodist Episcopal Church by inducting them into the various knowledges on which sociology, theology, and sacred oratory depend. When out of this theological school there arose schools of all sciences and all professions, a great denomination, which had especially addressed itself to the humble and the uneducated, claimed a place among the promoters of the profoundest and loftiest learning. It put itself on a level with the other great Protestant denominations, like the Congregational, Baptist, and Presbyterian, as an advocate and promoter of sound knowledge as the firm basis of sound faith and practice.

It is a touching and inspiring fact that many of the most important benefactors of Boston University have been men and women who themselves received but scanty education. To such men all our endowed institutions of learning have been indebted; but in the older institutions it is natural that

their grateful sons should claim the first place in contributing to their maintenance and enlargement. Thus at Harvard University during the past thirty years, which has been a period of considerable enlargement, the gifts of graduates of the university somewhat exceed in amount the gifts of non-graduates of the institution. But in a new institution like Boston University an analogous support from its own graduate cannot be expected until thirty or forty years have elapsed since its birth. It should always be remembered that in its earliest years it owed much to men who never knew by personal experience how a thorough training in youth may enlarge and enrich the whole life of the recipient. In the faith and hope of such men there is something pathetic as well as inspiring. All institutions of learning must sympathize with their beneficent generosity, and must desire to make it fruitful and lasting.

As the older institutions for which I speak contemplate the growth already attained by this young ally, they marvel at the contrast between their own slow and painful development and the rapid progress of this university. In two hundred years Harvard did not reach the stature which Boston University has reached in twenty-five. The contrast teaches that institutions of education, like individuals, in great part derive their resources, powers, and characters from the society to which they belong, and share the fortunes of that society. Therefore, in wishing increasing health, wealth, and influence to Boston University, we are also expressing the pious wish and expectation that Boston and New England may continue to develop all the material and spiritual elements which make peoples robust, rich, and righteous.

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V

EXAMINATIONS[1]

Examinations may be described as systematic and logically pursued tests of the knowledge and capacity of the persons examined, made by one who has an intelligent understanding of the subject. They take place wherever systematic instruction is given, but belong especially to the school system, from the elementary grades to the university.

There are two kinds of examinations, scholastic and state examinations. Scholastic examinations are those that develop naturally from the aim and purpose of school instruction, and involve only the master and his pupil. By state examinations I mean all those that have other aims than merely to test ability in certain studies and that are conducted by public officials or under official supervision.

Scholastic examinations have always been held and must necessarily exist wherever there is systematic instruction. Every question, every exercise given by the teacher is, broadly speaking, a means of testing the status of the pupil's knowledge; technically speaking, an examination is nothing more than an extension of these tests at the close of a definite period of study. The necessity for such arrangement is obvious. By means of an examination the teacher is able to judge not only of the success of his work, but of the standing of each pupil individually; secondly, it gives the pupil an opportunity of impressing his knowledge by repetition and an impetus to active reproduction. It is evident that an examination should take place on the completion of a course of study, and should serve at the same time as evidence of its success and of fitness to progress to a more advanced field.

State examinations (under which head ecclesiastical examinations may also be included) have nothing to do with a course of instruction, but arise from a need grounded in pub-

[1] Translated for the EDUCATIONAL REVIEW from Rein's *Encyklopädisches Handbuch der Pädagogik*, by Alice Nisbet Parker

lic policy. They are specially designed to test the proficiency of an applicant for an official position, or for some benefit or privilege, such as a scholarship or the right to one year's military service. These examinations are not conducted by teachers as such, but by agents of the state or Church. Teachers may be employed in this capacity, but as agents of the state they are then subject to state regulations.

Academical examinations occupy a central position between those of the school and the state. They resemble the state examinations in that they confer public honors and dignities and are conducted under the authority of the state; in other respects they are subject to the instructors and take place at the end of the academical course of study. In the same way, the final examinations at the gymnasium and the new *Abschlussprüfung* resemble school examinations in being conducted by the instructors at the end of the course, but are like state examinations in that they are prescribed and regulated by the state and success in them is rewarded by certificates that confer certain public honors and privileges.

The form of the examination differs and may be either oral or written. The written examination may be either short, extempore, and from a question paper, or it may be unsupervised work at home with all possible means of assistance at hand. Each method has its advantages and disadvantages. The merit of the written examination lies in the fact that it gives more opportunity for careful thought on the part of examiners and the persons examined. Questions and answers may take on a more precise form, while in oral examinations chance plays a great part. An unskillful question or an unweighed answer may have an immediate and unfavorable influence upon the result of the examination. Work done at home in an unspecified space of time, especially on a self-selected theme such as an essay or oration, affords the student the best opportunity for collected thought and for showing of what he is capable. The test here is not alone of what he knows but of how he works, his grasp of the questions and power to elucidate them, and his ability to make use of works of reference. This method affords the near-

est approach to scholarly work in examinations and is the severest test of intellectual ability. There is, however, a danger that a dishonest use may be made of works of reference. In this respect the examination paper is better, although open in a measure to the same objection. The thousand and one tricks by which the student smuggles in other assistance than that afforded by memory and thought are well known, and necessitate all the humiliating restrictions with which examinations are usually surrounded. Otherwise the examination paper is a fair means of testing, through its numerous questions, the compass of the student's knowledge, his power of presentation, and his ability to marshal his thoughts rapidly and on the spur of the moment. Finally, by careful comparison of the papers the relative ability of each individual is more easily comprehended by the examiner. The danger, too, of a prejudiced judgment, based upon the pupil's personality, which so often turns the balance for or against him in an oral examination, is here entirely avoided. All these advantages appear to give this method an undoubted superiority. In England it is almost the only one used. On the other hand, it has serious drawbacks. Rigid, minute questions do not admit of self-explanation; a sensitive, easily-confused nature stumbles over a question and is not able to regain its equilibrium; disadvantages of association always come to the fore in extemporaneous work. The habit of preparing for an examination is also unfavorable. This method gives rise more than any other to the custom of learning by heart answers to possible questions, or, in other words, to what the English call "cramming."

The oral examination has two advantages over the written: (1) it puts an entire stop to deception and cheating, and, what is more important, to even the intent to deceive; (2) it allows so little personal communication among the participants that an expert examiner obtains the clearest idea of the mental status of each individual when left to depend upon his own resources. Above all it enables the examiner to follow fully the thought of the student, to recognize superficial answers and those learned by heart, and to lead him to the field where

he can best manifest his strength. This is especially the case when the examination takes place without witnesses and is an exercise between master and pupil alone. The simultaneous examination of a number of pupils before many witnesses, or of a single pupil before a *corona*, hinders free expression. The other side of the question is that personal weaknesses on both sides have by this method peculiar opportunities for showing themselves. An unskillful or unsympathetic examiner confuses or frightens, and an excitable student will show to greater disadvantage than in a written examination. This method also gives great room for partiality or at least for the suspicion of partiality.

Practically, a combination of the written and oral methods would be the most judicious; the faults of each would be in a measure corrected and their virtues combined. In Germany the two methods are frequently united. In the schools we find written exercises and oral questioning combined in the *Abschlussprüfung* and in the *Reifeprüfung;* and in the academical and state examinations, we find the carefully prepared dissertation and the oral tests. The dissertation or essay gives the candidate the best opportunity for displaying his culture and ability; the school question papers, especially in examinations in languages, are the surest tests of fluency and skill in the use of language. The oral test confirms the examiner in his judgment of the written papers.

State examinations have reached their greatest development and have come to the place which they now occupy in public life in this century. The Middle Ages knew only school and academical examinations, although an examination of candidates for priestly orders was held by bishops. In modern times, with the closer organization of the course of study, there arose in the schools a system of examinations for promotion or transfer from grade to grade. Entrance examinations also came into vogue in the rural schools which owed their existence to the Reformation and were founded in the sixteenth century. The Würtemberg examination for entrance into the monastic schools, where maintenance and instruction were given at the public expense, was especially

well known. Inasmuch as applicants came to Stuttgart from Latin schools all over the country to take these examinations, they acquired great importance in the teaching profession.

Among the examinations for office, the examination in knowledge of candidates for divine orders by the consistory (*pro licentia concionandi*) took on at this time a more permanent form. Applicants for positions in the Latin schools—who, till the nineteenth century at least, were invariably priests—were examined by the same authorities. For the rest, the academical examinations were important to qualify for the learned professions, law and medicine.

Obtaining a public office first became dependent upon a state examination in the nineteenth century; the academical examinations were thereafter confined to tests of literary attainment and are necessary only during or after the academical course. It is now the universal custom for applicants for public positions and for the profession of law to come before an examining board in order to test their general knowledge of their particular branch before they may even enter the list of candidates. Then follows, after this general test of fitness, the special examination for office. The right to practice medicine also depends upon passing the state examination, and a certificate of proficiency as a teacher must come from an examining board appointed by the state.

The impetus for thus building up a system of state examinations lies in the desire to make government more and more independent of social and partisan restrictions. The object is to fill public offices with candidates who have proved their entire fitness for the positions, instead of with those who have only social position or political influence to recommend them. Appointments for ability and proficiency have taken the place of the system of patronage which in the last century determined the disposal of all official places. It can be said that the principle of state examinations is democratic; that they look for personal instead of social qualifications, for individual fitness instead of advantages of birth and position. The system began under an absolute monarchy,

but was perfected under the modern "government by the people" which found open expression in the French Revolution. It illustrates the maxim: *La carrière ouverte au talent.* A double interest depends upon it; first, the interest of the state, which thereby gains officials thoroughly and evenly equipped—and at the same time offers a wider opportunity to the whole population; and, secondly, the interest of the individual, as it is important for him to be able to reckon upon his proficiency to procure employment and to know that he need not fear the rivalry of mere social position.

The state examinations also were first extended to the schools in the nineteenth century. The *Abiturienten examen*, or examination of gymnasial graduates under the supervision of a government official (the Provincial School Councilor, in Prussia), was first introduced into Prussia in 1788, has since then been extended to the whole of Germany and to many neighboring countries, and has entirely superseded the old examinations for admission to the universities. This is obviously also in a certain sense a democratic measure; it makes admission to the universities dependent upon intellectual gifts and personal energy and acts as a sifter of the possible candidates for the learned professions. Without doubt, many who through social advantages would otherwise become recipients of offices and honors are by this examination compelled at once to renounce any such pretensions. It is undoubtedly owing to the influence of these examinations that at the present time families of high social standing are compelled to send their sons to the public schools, whereas during the seventeenth and eighteenth centuries the sons of the nobility had almost entirely disappeared from the Latin schools, instruction at court taking the place of attendance at school. On the other hand, it cannot be denied that the gymnasial final examinations, through their influence in lengthening the course of study, have excluded the poorer classes from the other examinations and from the professions more largely than in the last century.

Besides the *Reifeprüfung*, Prussia introduced in 1892 the so-called *Abschlussprüfung* into the schools. This comes

at the close of the six-year course in the high schools, and upon it is dependent the right to one-year military service and to entrance into the upper classes of the school. The other German states have almost without exception resisted following Prussia's example, and on good grounds. The educational disadvantages are so great that it is to be hoped the Prussian schools themselves will soon do away with this examination.

This leads me to another point, namely, the immediate effect of examinations upon schools and instruction. Of the effect of school examinations proper, those which arise entirely out of the exigencies of the instruction and have purely didactic ends, nothing is to be said. On the other hand, in all state examinations whose object is foreign to the instruction itself, all manner of unwished-for and deplorable results follow. I cite the following: (1) The examination changes the mental attitude of the student to the subject. The prospect of being examined necessarily turns his attention from the subject-matter itself and fixes it upon the examination; it therefore takes on a more external meaning. It is one object of an examination to stimulate industry and ambition, but it is overlooked that other results not necessarily intended also occur. Practical interest in the result of the examination may supersede the theoretical interest in the subject; and the advantage gained from the examination may be entirely outweighed by the lack of intellectual satisfaction obtained from the subject studied. It is an old experience that study for an examination becomes easily study *in futuram oblivionem;* the constraint of an examination often brings with it a dislike of the subject, and what one dislikes is dismissed from the mind so soon as the necessity for outward expression ceases. Plato recognized this when he says in the *Republic* οὐδὲν βίαιον ἔμμονον μάθημα—compulsory learning lasts but a short time. I think since Plato's time experiences of this kind have been greatly multiplied; many subjects are to-day made distasteful to many people by the compulsory examination. They are entirely responsible

for the large amount of "learning by heart" from short and superficial works, for a "general culture" in religion or philosophy resorted to by many candidates for office of teacher in the higher schools.

If the Roman Emperor, instead of persecuting the Christians, had compiled their doctrines in one great catechism and compelled them to learn it by heart, he would sooner have succeeded in suppressing them. This effect does not necessarily follow, but the tendency thereto will be greater, the more independent or advanced in life the candidate and the more delicate and subtle, I may say unexaminable, the subject.

(2) The examination gives to previous study a tendency to be superficial and directed to what lends itself to recitation. The knowledge that can be "shown off" counts for the most. Formulas, definitions, rules, forms, facts, and dates lend themselves to repetition; in short, all that is external, that can be learned and recited, but not what one thinks or feels. It cannot be otherwise; examination questions are necessarily more tests of the memory than of the judgment. One can repeat an account of the battle of Troy, the grammatical form of the Homeric dialect, the codices or editions of Horace and Lucretius, the history of the origin of *Faust* or *Wallenstein*. One can recite the distinctions in the different confessions of faith and even the "seven words from the cross," but such questions as what gave rise to the poems of Homer, to the contents of the writings of the New Testament, cannot be asked; especially as upon no other occasion is the person examined less inclined or less in the mood to give expression to his own opinions or inner thoughts. The result is that mere facts assume an importance which does not belong to them and that has only been enhanced by the preparation for the examination. It is undoubtedly a fact that the student who by "cramming" has primed himself with superficial knowledge and external facts, without much reflection, takes an examination with greater prospect of success than one who has read and studied with genuine interest in the subject and perhaps with far better results to his own

culture, but who has neglected the more recitable facts. One often hears from professors in high schools the complaint that students make themselves acquainted with previously written examination papers and make these the object of their greatest efforts; they also seek to protect themselves against the risks of an examination by inquiries of their comrades who have had experience and by practice in answering questions put by them. It is certainly to be regretted when the pursuit of culture sinks to such a level; I would not, however, have the courage to advise a student to ignore all thought of examinations and their rules and to give himself up entirely to a purely intellectual interest in his studies. Such ideality, which occurs not seldom among students, is apt to have a rude awakening upon contact with reality and its exactions. Therefore the students are not without reason in suspecting (oft-repeated assurances to the contrary, notwithstanding) that gymnasium and *Abschluss* examinations afford no especial preparation and only serve to bring to the notice of the supervising board the already fixed judgment of the professors. An examination has characteristics of its own that make themselves felt against the will of any individual; it affords a firm basis for judgment, especially when it is held before the supervising board, who in this way become acquainted with the student and are then able to form an opinion of the work of the professors.

(3) Examinations tend to produce uniformity and mediocrity. When the college final examinations in Prussia spread to neighboring states, they were strenuously opposed by many old schoolmasters, such as Ilgen in Pforta and Jacob in Lübeck. They looked upon them as restrictions upon the freedom of teacher and pupil and as an oppressive measure that checked the development of the independent and individual life of the school. An examination that takes into account not only the standing of the scholars but is also designed as a test of the master and the school, has necessarily the effort of producing uniformity. A principal could hardly do less than arrange his curriculum with regard to the school-

board examination, and for the sake of the student who would be very sensitive to an unfavorable judgment. Everyone knows the effect upon the army of a change in the inspection. One can only say that in this case uniformity is necessary. Conformity and submission of one's individual judgment to that of one's superiors are absolutely necessary; whether the subordinate does his best or not depends entirely upon unity in his instruction. In the intellectual life, however, uniformity and equality are of far less importance than originality and variety; but an examination has an opposite effect and has a tendency to produce a mediocre standard for all students in all subjects. In every examination of a large number of persons the clever ones find little opportunity for doing themselves justice; the questions must be chosen to suit the average candidate.

In all examinations the most successful are those who come to them without strong tendencies or gifts in any direction but who tread the even path of mediocrity, whereas natures with unmistakable and decided originality and special talents often suffer under them.

Without doubt they produce highly respected scholars and officials, but it is also not to be doubted that progress in all fields of intellectual effort comes through strong one-sided and unusual natures and not through correct mediocrity. Orthodoxy is good in many things, but does not open new avenues for thought and life.

To sum up: state examinations tend to suppress individuality, to destroy independence, to promote superficial knowledge and to stamp out all attempt at original thought. The superficiality which at present goes under the name of education, the glib readiness to discuss all subjects, are undoubtedly the outcome of the technical public examinations. Examinations require knowledge that has no relation to the positions to be filled and do not take into account the special fitness of the candidate. They encourage superficiality and neglect proper foundations. Finally, the possession of the certificate gives a false feeling of security and self-complacency.

Am I mistaken in thinking that in the eighteenth century the pursuit of culture was more spontaneous and that the feeling of personal responsibility was stronger among professional men than at present?

This statement of the disadvantageous effects of examinations cannot, however, lead to a recommendation for their abolition. They are necessary evils; we cannot return to the system of individual preference and patronage, but it is well to understand that evil results exist and are unavoidable. This maxim is, however, important to remember; *examina non esse multiplicanda præter necessitatem.* Do away with superfluous examinations. They show a preference for red-tape and for rules and mediocrity. In these respects Prussia is unhappily rich. H. von Treitschke, who in other respects shows a high appreciation of Prussian systems, has said with stern judgment: "Our unfortunate and mischief-working examinations, a genuine curse to Germany, are unhappily of Prussian origin."[2]

The following rules are suggested for the guidance of examiners:

(1) Lay stress upon the positive elements. The examination as such has the opposite tendency, to bring out all deficiencies.

(2) Begin with easy, simple, and specific questions. An obscure question and answer easily upset the whole examination.

(3) Treat mistakes and misconceptions after the advice in Gal. vi. 1: "Brethren, if a man be overtaken in a fault, ye which are spiritual, restore such a one in the spirit of meekness; consider thyself, lest thou also be tempted."

(4) Do not forget that the majority of people do not put their "best foot foremost" in an examination.

(5) Do not forget the *suaviter in modo,* in a desire for the *fortiter in re.*

(6) To recommend the unworthy and ignorant is to take away from the industrious and able man what rightly belongs to him.

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[2] *Vorlesungen über Politik,* I: 43

VI

THE TEACHING OF PSYCHOLOGY

The value and place of the teaching of psychology for a scheme of education can only be determined by the broadest survey of the evolution of life in general and of man in particular. Certainly one of the most important, perhaps even the most important, factor in biological evolution is psychological insight, by which adaptation to psychical environment is secured. Thus, even in very low grades of life, the individual interprets the intents and feelings of others toward itself, and takes the necessary precautions of defense, or offense, or alliance, demanded in the competitive struggle of existence. To know with assurance its friends and enemies, this is a matter of the most vital import; and animal life of all grades is forced to become expert in some kinds of mind-reading, and with a certain instinctive accuracy. A habit of practical psychological observation has thus been forced upon and integrated in living beings by the necessities of existence, and man, as the most advanced of living beings, has his pre-eminence mainly by his superior powers of psychic insight. On the other hand, we note that the over-use of psychic interpretation, as seen in the complete animism which prevails in animal, savage, and child life, has been the greatest drawback to progress. When all realities have been considered practically, and potentially at least, as persons animated by love, fear, anger, etc., and adaptations have been made to them as such, there has been little success in a vast mass of relations which civilized man now regards as impersonal. The progress of mankind has largely consisted in depersonalizing or driving out psychological interpretation from the vast realm of natural forces, and of securing adaptation by strictly scientific physical means. Hence, in highly civilized humanity, psychical interpretation has in a very considerable

range been forced out by physical interpretation as an adaptive method in the struggle of life.

But notwithstanding that in one view of the case psychic insight has been largely limited as a method in human evolution, from other points of view it has been largely expanded. For instance, the increasing term of childhood when there is complete dependence on nurses or parents means that the environment is predominantly personal during the earliest years of man, and in consequence psychical interpretation is the main factor in adaptation. Again, increasing civilization, as it means increasing sociality, implies the increasing importance of psychical environment and its interpretation and study. Civilization removes man from direct and coarse contact with things, and emphasizes psychic adaptability. A few specialists, managing machinery, effectually deal with the material side. In the complexity of modern life the greatest demand, then, is for rapid and accurate psychic adjustment; and perhaps the greatest drag on progress to-day is the enormous amount of misapplied activity resulting from misunderstanding of self and others. And scientifically trained psychic insight can alone give that true catholicity upon which successful cosmopolitanism can be founded. When we behold what physical science in its multiplicity of applications has done for mankind, we believe that there remains for psychical science an even greater and more beneficent task.

The value of psychic insight is thus very apparent, and also the necessity for scientific training in psychologizing. And it is further evident that scientific guidance in mind-study ought to begin with the earliest years of life. The infant gropes its way to some understanding of the psychic attitude of those about it, and the child picks up in an incidental crude way some observations on mentality. Thus the child is early taught to discriminate between a dog barking in anger and in joy; the nurse assures him that Carlo will not hurt him, but wishes to welcome him. And so in many ways, self-guided and guided by the common sense of others, the child and youth come to a very rough, imperfect adaptation to their

psychic environment, but learning nothing with the depth and breadth of truth which science alone can give. The child and youth likewise pick up a knowledge of things in an incidental way, but we do not deem this sufficient, and demand that, from the kindergarten upward, the young be scientifically guided in the study of objects. But it is high time that scientific education in study of minds as well as things should be adopted for the whole course of school training. It is far more important for the child scientifically to study angers and fears than seeds and larvæ; in short, to appreciate its own psychic state and its psychic environment is of more significance than knowledge of its physical state and environment. And certainly the training in psychics no more than that in physics ought to be left to a prejudiced, partial, heterogeneous picking up throughout the years of childhood and adolescence. But crude, unsatisfactory information is all that the vast majority of pupils ever reach when psychology is taught only for a brief period in the later years of college life. A rational scientific pedagogy demands then that the teaching of psychology, that is a training in purely scientific observation and interpretation of consciousness, begin with earliest childhood and continue through school life.

But it may be said, Is it not absurd to try to teach a child psychology? Is it not like trying to teach it metaphysics; that is, a bringing to it something which is far beyond its understanding? However, psychology is a very simple matter and all children inevitably psychologize, and that a great deal from their earliest years, not in a scientific, disinterested, complete way, but yet each is continually observing and interpreting mental fact in adapting himself to psychic environment. The object of teaching psychology to children and youth is then only to make their psychologizing scientific; that is, fair, true, and thorough. By cultivating in children a receptivity to all kinds of psychic quality, an earnest open-mindedness toward every mode of psychism,—no matter how apparently humble or exalted,—is to remove that narrowness and selfishness, that unscientific automorphism, which is one of the greatest hindrances to mental and moral

development. The teaching of psychology in all cases must begin not with text-book work, but with individual direct instruction. Let the pupil give his own experiences and his observations on the experiences of others and be helped to right interpretation. Encourage him frankly and honestly to note his fears and other emotions, and interpret them for their real cause and significance. So also as to dreams and the whole representation-life, the child can be much helped in self-study. But emotion-life and will-life first naturally attract the notice of children, and instruction here, as elsewhere, must always follow on the order of natural interest. And all the expression of mental life in others, particularly the facial and manual, is a department of study where children observe from the first for themselves and where they especially need direction. The pupil should thus get a thorough acquaintance with the nature of mental fact as such, and with the method of dealing with it. In psychology, more even than in other sciences, the object of teaching should be a training in method and spirit of investigation, for here, alas! by reason of the very intimate nature of the subject-matter method has been so largely wrong. Simple observation should come first, and analysis, classification, and experiment later. Gradually you will be able to lead the pupil to the scientific temper, the simple desire for truth, with reference to all those personal and vital matters where bias and misinterpretation are so much the rule both with adults and children. He will thus gradually grow up into a free and full self-consciousness and consciousness of consciousness, and attain the highest truthfulness and thoughtfulness both as to himself and others.

It is obvious that the teaching of psychology as a subjective science demands individual instruction more than objective science does. The object is equally apart from all of a class of students, and all the class at once can follow physical experiments; but in the study of the subject each student is thrown primarily back on himself. The delicacy and difficulty of dealing with personal matters in a purely scientific spirit also point to individual instruction as the

main method in teaching psychology. But doubtless in some ways class instruction may very profitably be carried on, as for instance, in studying expression of emotion from photographs, just as Darwin accumulated evidence for his book on this subject. But the main method in psychological instruction ought to be individual; a frequent but informal friendly consultation alone with the pupil. And this, it must be remarked, should be wholly pedagogic in spirit. The teacher is set to help the individual to his highest development, and not as investigator to develop some department of science. The true teacher seeks, then, to understand the student not in the interest of science but of the student. The mixing of investigator and teacher in the same person is an evil to both. Goethe as a student saw this difficulty and justly animadverts in his *Autobiography* upon those who "teach, in fact, only that they may learn." It certainly is high time that the investigating became entirely differentiated from the teaching function.

The introduction to psychology and all the early training must emphasize mental fact as such, without any admixture of mere objective fact, or of such entities as mind and body. This, I am aware, is quite contrary to present practice, for all elementary text-books introduce the study of consciousness by way of study of nerve, and through a distinction of mind and body, which is, moreover, at bottom a false contrast, and it also appears to me quite out of the way that the beginner should attack the psychology of nerve, for men naturally approach consciousness long before they come to any knowledge of nerve. In truth, at any stage the study of nerve cannot add to our knowledge of mental fact, but we can only correlate nerve-activities which we may observe with mental operations of which we are already cognizant. We do not introduce astronomy by way of astro-physics. If we compare the best primers of such sciences as astronomy, physics, and biology, with elementary books on psychology we shall perceive how far psychology is in arrears. We much need a primer of psychology which shall approach the science in a direct, simple inductive way, starting from commonplace

introspection and the inference as to other consciousness thereon based. Science, as always uncommon sense, yet starts from common sense, and pedagogy in connecting unknown with known must follow this order. Hence the best introduction is that which takes up the ordinary common-sense psychological observations of everyday life which we are continually making in self-observation, and in the observation of others in which our contact with others consists, and throwing the light of the closest, most critical scientific study upon it.

But it may be said that the scientific study of consciousness by children and youth is fraught with the grave danger of making them mere spectators; that all the vital interests of mankind will become to them a mere spectacle for scientific curiosity. The scientist by his objective impartial study certainly thereby tends to isolate himself, and life and mind become interesting and valuable only as fields of scientific exploration. But the fundamental assumption of pedagogy is that education is not for leading the youth to stand aside from life and merely look at it, but for preparing him to take the intensest and highest part in life. The aim of general education is not to make mere scientific or artistic observers who view in the world a stage play enacted for their private benefit, and who thus easily become dilettants and cynics, and if the teaching of psychology as a science led to this result, it ought certainly to be dismissed from the curriculum. However, I believe that the tendency of psychologic insight is not toward isolation but that it is the basis of all true helpfulness and sympathy. To psychologize is to have the fellow-feeling; we can only know others' experience so far as we can re-experience it in ourselves. Thus psychics cannot stand over against its object as does physics, and survey it in a purely objective manner. Psychologic insight to be real must be sympathetic, and sympathy to be true, and not mere pathetic fallacy, must be based on correct and full psychologic insight. The mischief which in this world comes from misunderstanding and lack of appreciation is enormous, and it is the office of the teaching of psychology to remove this

fearful load from mankind, and to promote a true vital socialization. What then is more important for society than that every member shall have delicate, accurate, full, and generous sensitivity to all psychic phenomena in others? Tact is only applied psychology. To quicken and correct psychic insight is then a task of the greatest importance for civilization, and is the highest office of the teaching of psychology as a prominent element in the whole course of education.

If scientific psychologizing is the only road to a true vital acquaintance with others, it is also very evidently the only road to a true vital acquaintance with self. If a man's views of his fellow-men are distorted by prejudice and bias, much more are his views of himself; and though the value of self-knowledge has been emphasized from the days of Socrates, yet self-knowledge has as yet scarce gone beyond an empiric stage; that is, it has not yet been based on an application of a really scientific psychology. Scientific insight into self can alone give that calm, clear, and certain objective vision which enables one to treat himself as if he were some other person, and in giving complete self-criticism makes him superior to himself, and so leads to that perfect self-control and rational self-activity which is the highest type of living. Mind self-conscious, and therefore self-directive in fulfilling itself, is the latest and noblest form of life, and the scientific guidance of the child to this standpoint is the main work of all education. It is, however, very important to observe that while education in self-consciousness is most necessary, this ought not to be any merely curious, prying, twigging self-observation which effaces what it observes, and so ultimately paralyzes all mental life. Led into the maze of consciousness of consciousness and so on *ad infinitum*, the mind perpetually turning back upon itself finds only this act itself, and loses all reality in a puzzling whirl of self-consciousness. But while there is a real danger and difficulty here, it is one which may be guarded against by impressing the truth that self-consciousness is merely an eye for revealing the rich and manifold landscape of self-life, and not to be turned back upon itself, not an eye to be looking into itself, and seeking always to

view vision—as impossible a feat as squaring the circle or inventing perpetual motion.

The greatest difficulty in the way of the course in psychology I have outlined is the imperfect state of the science and the lack of training, so that it may seem wise to leave the teaching of psychology out of early education at least, rather than allow such a delicate work to be ignorantly and unskillfully done. The trouble with psychology and with its teachers is lack of psychic insight. We are at present doubtless as blind to vast ranges of psychic phenomena as the ancients were to vast ranges of physical phenomena which have been opened up to us by instruments of modern research, such as the microscope and telescope. What eyesight, natural and aided, accomplishes in astronomy, introspection must accomplish in psychology; but how can instruments corresponding to the telescope and spectroscope be invented for psychology! Psychology can be materially advanced not by psychological or physical experiment but only by that sharpening of psychological vision, that perfecting of consciousness of consciousness which will result from developing this faculty in the young through the whole school life. As it is from the school children who are now familiarizing themselves in a scientific way with objects that the naturalists and physicists of the future are to come, so also the psychologists of the future are only to be obtained from these children as scientifically studying subjects as contrasted with objects. If psychologic insight is perfected as it ought to be, the psychology of a century hence may well be unintelligible to us as revealing sides and modes of fundamental psychic activity of which we are now wholly unsuspicious, but which are as basal to psychology as atom and molecule to physics. For the present the teaching of psychology must begin imperfectly, of course, but only thus carefully and tentatively can the child be led to some real understanding of himself and others, and psychology itself come to any great advances as a science.

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VI

DISCUSSION

ENGLISH LITERATURE AT THE COLLEGES AND UNIVERSITIES

The striking contrast between American and British universities as to mode of procedure in literary study may well induce serious reflection. In the English, Scottish, and Irish universities the faculty of English literature rarely consists of more than one man, who offers two or three, or at most half a dozen courses; while in this country we have developed the literature department until it is, both as to faculty and courses, the largest in the university. At the bottom of this difference in size and development there is a fundamental difference in conception: The British universities have never come to regard English literature as an educational subject; they have filled the chair not with teachers but with authors. A similar spirit prevailed in American universities formerly, as when E. R. Sill and Sidney Lanier were professors; but recently we have made English literature into a thoroughgoing information subject, and where a dozen or fifteen years ago was one genuine man of letters we have now a score of practical teachers.

Indeed, if literary instruction at the universities had any determining influence over the literary product of the nation, one would say at a glance that in the field of belles-lettres Americans must soon outstrip their English cousins. And if the extent of literary study at the universities is without any relation to the literary product, present or prospective, then the fact cannot but arouse suspicion that such literary study is not what it should be. The recent history of the American English department, and the extravagant methods of procedure now in vogue, would indicate that what Emerson warned us against in 1837 has come to pass: In the department of literary study, American colleges have allowed apparatus and pretension and pecuniary foundations to re-

place creation with drill, and consequently, so far as literature is concerned, they are "receding in public importance, whilst they grow richer every year."

A study of the facts makes it plain that the English department in its present advanced stage is one more instance where American enterprise has gone to seed.

The concentrated effort to better the instruction in English composition at the colleges is fresh in the public mind. The movement was beginning when Professors Hill and Genung published their *Practical rhetorics*, and these books stimulated the reform. The study of English (comprehending rhetoric, composition, language, and literature) soon attracted the national attention of educators. College conferences on English were held in different sections of the country, and these, with the labors of the National Educational Association's Committee of Ten on English in secondary schools, crystallized the reform. From the reports of these extensive discussions, it is to be noted that the new impulse, which had been at first felt only on the writing side of English, did not subside when the improvement in composition was accomplished: the current leaped over to literature. Favoring conditions attended: just at this moment came the anti-classics movement. Greek and Latin began to let go their hold on the curriculum. Educational leaders said the word, and modern literature came forward with a bound. In this progress English naturally held its own with the literatures of the other living tongues. Having thus inherited the forward impulse which had run through rhetoric, and now receiving a second acquisition in the trend away from the classics, the department of English literature took on new life. College men and women soon discovered a congenial occupation in the teaching of this subject. They saw the profession beginning to grow, they joined it in numbers, and it enlarged like the snowball.

But the third and most notable force back of the expanding English department has yet to be mentioned. This was the introduction into literary study of scientific methods. Rich contributions were being made to the knowledge of Biblical literature by the higher criticism. The essence of

this modern intellectual power, as everyone knows, is the application to Bible study of the historical and comparative methods, first tried with such marvelous results in the realm of physical science. It was this success of objective criticism of the Bible that encouraged analogous efforts in the study of secular literature. The results in both were of a kind. The so-called scientific criticism gave us new and sounder appreciations of Shakspere, as the higher criticism had given us rational interpretations of Genesis and the Psalms. Both operated as vigorous correctives of traditional errors.

When it was announced now that literary study was transformed into a scientific subject, the rush that was already under way to the new field presently became an avalanche. There came a thousand capable minds adapted to the labor of minute analysis and elaborate classification, but mainly lacking in literary gift and spiritual insight. The notion immediately prevailed that literature was just so much raw material to be trundled into the laboratory and reduced to cold facts, as the analyst crushes the paving-brick; or, if a poem was regarded as an organism, it was so only to be vivisected. For when science had once found entrance into literary study it rapidly overran the domain. The method of comparison, and the disinterested attitude of science, and the temporary discarding of judicialism were excellent things for literary criticism. They were so, rather, while they continued in the control of true scholars. In the hands of the multitude, to whom their use rapidly spread, they became very dangerous.

For along with the newer scientific methods, the historical and the method of comparison, there came also into literary study the good old Baconian plan of the indefinite accumulation of facts. A regulated form of this inductive process was of course necessary to the use of the later methods, and, as I have said, in the hands of great scholars it was well. But the swarm of literary students which now set to work did not consist of scholars, either actual or potential; it was made up of one-half more or less scientific minds with little sense for literature, and one-half students with more or less literary appreciation but no understanding of science. The word of the hour was Science, and quickly the essential watch-

words of literary study, ideals appreciations, power, were banished out of sight and mind. Or else they were buried under heaps of statistics; for now counting began. Specialization in English in most of the graduate schools (and the graduate schools train all the teachers) is to-day little more than a vast system of manufacturing statistics. I have often been hard put to it to answer the inquiries of puzzled outsiders who wished to understand the mysterious labors they had witnessed on the part of "English" specialists. In particular, a lady of very considerable culture, residing temporarily in a circle of degree students, described to me the voluminous notes of a young woman who expected to win an M. A. by a study of Browning. She was burning the midnight oil, against rules, to count the colors, the animals, the flowers, the precious stones, and the figures of speech to be found in Browning. The poet's complete works were to be ransacked and this misguided but ambitious student was piling up lists of words and columns of figures to fill more notebooks than there were volumes of poetry. The purpose of it all I could not explain to my questioner, though I myself was one of the initiated in English. I could only reply: "It is for the Master's degree; they have set her at this trifling and I hope she may win the letters, for if hard work deserves a degree this woman should get hers; she is working herself out of health and old."

That the effects of such misdirection of effort are far-reaching and ruinous, it is superfluous to say. Teachers and students both are stunted. I have seen gifted and brilliant teachers, young men who promised things worth while, blighted by this half-truth of a system. To accept the dictum that literary study or criticism must be objective only, is at the very start to commit a kind of half-suicide: Enthusiasms and the personal element are a natural half of the man; and the teacher must be the man. And then the multiplex nothings to which misapplied and half-applied science brings the student of literature place him far on the road to impotence complete. These new workers and their methods in school and college literary study are crushing out what is vital. In a language of Swedenborg, they are shutting the

doors of mind and of thought by placing learning above inspiration—not only learning, but empty learning. The kind of investigation that obtains among most modern literary students is nothing better than a scholastic atavism; it returns to the aimless perversions of the Schoolmen, whose favorite problem was to determine the number of angels that might dance on the point of a needle.

Of course the ranks of literary students were rapidly augmented. Joining force with other factors, as before mentioned, the method "boomed" the department of literature to half a hundred courses and a quarter hundred of instructors. Nor was this at all unnatural, since if every author, group, movement must be expressed in terms of the census office, there was not only room but a demand for a large increase in faculty and courses.

But the larger grew the English department, dimmer and dimmer shone the taper of true illumination. As bad money drives out good money, so bad study drove out good study. The principal aim of literary instruction was quickly pressed to the wall: this aim is the twofold one—to implant appreciations, and to inspire, as Emerson would have said, the Active Soul. These offices our overgrown English departments conspicuously do not perform. Wherever the desire for exact facts has got into English lecture rooms, thereafter nothing but facts and lots of them will satisfy. Whatever is insubstantial has disappeared; the visiting stranger who expected inspiration can only echo the poet's cry

> "Spirit of Beauty, that dost consecrate
> With thine own hues all thou dost shine upon
> Of human thought or form,—where art thou gone?"

In a word, it is time we English teachers realized that the mere scientific study of literature is as cheap and factitious a thing as would be the mere literary study of science.

Of course, the university method in English has achieved some good results. It has laid open to undergraduates a rich vein of knowledge, for example, in the study of literary constructions as it is pursued in a number of institutions. It is surely a very practical and necessary information that is

imparted nowadays in the technique of the drama, the handling of plot in the novel, and the rules of art applicable in all the various forms of literary creation. But along this line, as along those already mentioned, it seems impossible to have enough without having too much. Teachers are led into fanciful analyses and syntheses; the classics are done to death in the name of thoroughness. Beside this, a false conservatism (as will be seen by an examination of university announcements) confines teachers to books of dead authors, and the literature that is making is wholly neglected. The natural place of the English department is obviously at the center of the intellectual and artistic activity of the nation; but it is a fact that American universities are drifting farther and farther out of touch with the creative forces of our literature. Faculties of from ten to twenty-five teachers give students no taste of the new books. It is painful to imagine the thoughts students will have about their college instructors when they enter the world and discover that they have been led totally to ignore contemporary genius. It will be no wonder if they curse the stupidity of pedagogues who kept them chopping up the classics into mincemeat wantonly, when they should have been taking "into their brain and blood" the new beef of Kipling, and the rare wine of the vintages of William Watson, Anthony Hope, and our present-day romanticists.

The situation is almost one to revive and make reasonable the old, despairing question, Is literature really teachable at all? Without presuming to reopen that rather nice question, it is safe to say that what we should welcome in literary study now would be signs of a reactionary movement. A return were salutary to the conditions of the earlier day when the creators were also the teachers of literature as by natural right. Any direct loss to letters, possibly to be incurred by drafting our authors to the college, would be returned a hundredfold through their inspiring influence upon students. What college devotees of literature want beyond everything else is to come into touch with the great men of literature. A single course of lectures by a contemporary book-writer were worth what it would cost if we had altogether to sacri-

fice our modern inflated department of English. Genius, which speaks always "in the right voice," is what colleges need. And it is in the literature department, if anywhere, that the shadow of intellectual beauty must fall upon young spirits, that to it they may vow to dedicate their powers, and not to machinery and ineffectual toil.

As someone has well said, Ideals must be added to the scientific method. If it be impossible to restrain within bounds the spirit and methods of science in their adaptation to literary study, it were better to sacrifice the tributary and preserve the integrity of the main stream. It would seem to be an easy task to confine laboratory study of literature to investigation that investigates something, but we have seen that this has not been done. Assuredly, no literary teaching or study may henceforth safely ignore science and scientific methods. The question is, Who shall be trusted to fuse the spirit of science with the spirit of literature? In any case, they will be few, not many.

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VII

REVIEWS

Rousseau and education according to nature—By THOMAS DAVIDSON (Great Educators Series). New York: Charles Scribner's Sons, 1898. viii + 253 p. $1.00

This is a serious and masterly analysis of the character of Rousseau and of the forces and motives which played a part in his life and his writings, with special reference to his theory of education. It is a candid and philosophical exposition of Rousseau's educational views in relation to his life and his social theories, and as such it meets a demand which has long been felt by thoughtful teachers. Heretofore the commentaries on Rousseau have mostly been of a fragmentary character and they have laid disproportionate stress upon the details of the *Émile* and have disregarded the philosophical significance of the work and its relation to the historical setting. Professor Davidson was especially well qualified, by his broad scholarship and by his special studies of social and philosophical questions, for the task which he undertook in this treatise. He is, however, by reason of his own ethical and social theories, somewhat lacking in sympathy with Rousseau. His criticisms are pointed and forcible, while his commendations are all general in character and therefore more likely to pass unnoticed.

Rousseau is represented as having been unwilling to consider the conditions of success and to apply himself continuously to any definitely purposed task. He is classed among the "dalliers" who live for "passive enjoyment," who, "endowed with keen sensibility and strong appetite which tend to direct attention upon themselves and upon immediate objects, and usually destitute of ambition, seek to enjoy each moment as it passes, pursuing no definite path but wandering up and down the field of time, like children plucking the flowers of delight that successively attract them." Rous-

seau's life was not, however, wholly without a directive principle. He was the man of nature, the follower of his intuitions, the servant of his feelings. To him these were all good, but the artificialities and corruptions of society caused him trouble and grief and led him astray. There may have been some truth in this plea. There evidently was truth in his plea for individualism and spontaneity over against an arbitrarily constituted order of society and injustice in political administration. But feelings are an uncertain guide, and he who trusts his feelings alone will make many crooked paths.

Professor Davidson devotes the first chapter to a consideration of the sources of Rousseau's ideas, which are referred especially to the social theories of Hobbes and Locke and to the sentiment of Nature, "which was fermenting in men's minds" at the time when Rousseau came upon the scene. Two chapters are devoted to a spirited and discriminating sketch of Rousseau's life, in order to show how the thoughts which found expression in the *Émile* were first woven into the texture of Rousseau's character and realized in a most unhappy form in his life. One passage, in Professor Davidson's best vein, may be quoted to illustrate his method of analysis. It is a summing up of the effects which Rousseau's first period of vagabondage had upon the youthful adventurer:

> (1) It had satisfied his lust for adventure, and made him willing to settle down to a quiet life; (2) it had dispelled all the glamour attaching to courts, castles, palaces, and high life, and awakened in him a profound and enduring passion for rural simplicity; (3) it had made him acquainted, as hardly anything else could have done, with the character, lives, needs, and sufferings of the common people, and awakened in him a lively sympathy for them; (4) it had inspired him with a passionate love of natural scenery, such as no one before him had ever felt; so that he may fairly be called the inventor of the modern love of nature, the inspirer of the nature-poets of all lands; (5) it had made his language the expression of genuine passion and first-hand experience, and so given it a force which no style formed by reading or study ever can have. All these things told in the future.

These effects of his early life were never effaced from his character and thought. At thirty "he is still the natural man, pure and simple, with egoistic and altruistic instincts of a purely sensuous, not to say sensual kind." And he remains

the natural man, the man of feeling, in sympathy with the common people and with nature, and out of sympathy with the existing order of society and forms of social practice, until the last. Rousseau's natural man was not to live in such a society, but in a society freed from artificial inequalities and refined injustice. The natural man was not, as Professor Davidson sometimes appears to think, a solitaire or a savage, but a man in whom nature was unfettered and who lived in a society naturally constituted. The arbitrary isolation of Émile is intended to preserve him from the prejudices, corruptions, and arbitrary conditions of a falsely constituted society.

It will not be possible to follow in review the detailed account of Rousseau's educational views, which Professor Davidson treats at length and criticises with pointed severity. The numerous excellences in the *Émile* are pointed out, but are touched only lightly, leaving the impression that the critic was more concerned to guard against the bewitching evil influence of the author of the *Émile* than to emphasize any positive truth which might be learned from him. The historical perspective is sometimes neglected, and Rousseau is treated as if he were presenting to the teachers of the last decade of the nineteenth century detailed directions for the education of boys. For instance, Rousseau's plea for the liberty of childhood is condemned because it seems to involve a false standard of manhood, but there have been times when it was necessary to cry out in defense of the liberty and spontaneity of childhood against the arbitrary domination of parental will, which, with yet more strictly animal interests, makes the child to serve parental caprices, or, with false standards of life, leaves neither rights nor interests but only duties for the child. It is even yet sometimes necessary to protest against arbitrary attempts to mold all children according to the same pattern irrespective of natural talent and disposition, or to make life both unproductive and miserable by false standards of manhood or arbitrary methods of education aimed at producing either stilted pedants or imitative puppets. It is possible that the child's "spiritual attainments, or the beauty and nobility of character," which Pro-

fessor Davidson rightly prizes, may be grafted upon his natural potencies and conformed to his natural development in such manner as that freedom and spontaneity and development toward moral manhood might continue together. That the method which Rousseau suggested for the training of the child was inadequate and in many particulars arbitrary, not to say vicious, Professor Davidson has abundantly shown. The artificial and superficial devices of Émile's tutor are justly condemned, but Rousseau's purpose in isolating Émile and in having a tutor, and the fact that when fathers were properly trained tutors were not to be necessary, are not so clearly recognized.

The concluding chapter discusses Rousseau's influence on politics, thought, literature, and education, and the discussion is admirable. Space will not permit us to particularize. A few sentences may be quoted for illustration:

> In education, as in other things, his passionate rhetoric and his scorn for the conventional existent, as contrasted with the ideal simplicity of Nature, roused men from their slumbers, and made them reconsider all that they had so long blindly taken for granted and bowed before. And in so far his work was invaluable. His bitter, sneering condemnation of the corrupt, hypocritical, fashionable life of his time, with its distorting, debasing, and dehumanizing notions of education, and his eloquent plea for a return to a life truly and simply human, and to an education based upon the principles of human nature and calculated to prepare for such a life, were righteous and well timed. His purpose was thoroughly right, and he knew how to make himself heard in giving expression to it. But, when he came to informing the world in detail how this purpose was to be carried out, he undertook a task for which he was not fitted either by natural endowment or by education.

On the whole Professor Davidson has produced a timely book which will be eagerly read by every progressive teacher, and by many others whose interest in social and educational questions is of a less technical character.

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A history of Canada—By CHARLES G. D. ROBERTS. Boston, New York, and London: Lamson, Wolfe & Co., 1897. 493 p. $1.50.

A history of the Dominion of Canada—By JOHN B. CALKIN, M. A. Halifax, N. S.: A. & W. Mackinlay, 1898. p. 448. 50 cts.

The history of the Dominion of Canada—By W. H. P. CLEMENT, B. A., LL. B. Toronto: William Briggs, 1897. 350 p. 50 cts.

The growth of a national consciousness in Canada explains the somewhat unusual phenomenon in the educational world of a public competition in producing a text-book in history for school purposes. In matters connected with education, which are reserved for provincial administration, the pre-Confederation spirit of particularism seems to have survived; and it was not till a few years since that there was any strong demand for a national history to give due justice and attention to all of the different communities and elements from which the Dominion was formed, and a nation now is taking shape. Each province retained its own school history, treating in great detail the parish politics of its own record, and giving but a cursory mention to the great formative events of the history of the other Canadian colonies and provinces. The result was to hinder the growth of a national idea; and as the generation grew up to power and political influence, to whom the old particularism was but a phrase, it came to be recognized as necessary that a Canadian history should be placed in the hands of the school-children which was Canadian, and not New Brunswick or Ontario in sentiment or in name.

With this object in view a council of educational experts was chosen from the different provinces; and the education departments practically pledged themselves to adopt the history to which the award was given. Prizes were offered to the best of the unsuccessful competitors, and writers and teachers in all parts of the Dominion entered the competition. The award was made to Mr. W. H. P. Clement, B. A., LL.B., whose history was by the judges proclaimed to be the best suited for the purposes indicated. It is not often that the public has the chance of revising a decision made by the judges, for the unsuccessful competitors are generally only too willing to forget their failure. But in this case two of the unsuccessful histories have been published, to one of which

honorable mention and a *solatium* of two hundred dollars was given, the other being left unnoticed among the eleven unmentioned and uncompensated competitors. On an impartial review of the three which have been published, it is difficult to conceive how any body of men claiming to be experts in educational matters could have made the decision they came to. Had the two unsuccessful histories not been published, one might have been called on to lament the great lack of ability which the competition must have shown, to admit of Mr. Clement's being considered the best; but when we compare the history to which an award of two thousand dollars at once and a ten per cent. royalty was made with Professor Roberts's *History of Canada*, or even with Mr. Calkin's, the decision is simply inexplicable. Mr. Clement's history is said to have been revised under the direction of the committee of experts; and what it must have been before the revision imagination cannot picture. It is the embodiment of all that a school history should not be. It is dull, it is badly printed, it deals with matters in which no child can be made to interest itself. It is crowded with details such as everyone makes haste to forget; and its whole conception is in defiance of all modern educational ideals. It is exactly the book to put into the hands of the pupils of a teacher who makes the children learn history by heart. There is not a touch of imagination or a glimmer of style within the boards of the volume. It is indeed fairly accurate in a deadly dull sort of way; but what that way is may be conceived from the titles of the paragraphs of a chapter taken at random: The political system of Great Britain; the colonies governed from Downing Street; the colonial office; the governor; the executive council; colonial officials; a family compact in the provinces; colonial parliaments; colonial revenues; election laws favor the family compact; control through the legislative council; in the two Canadas; in the Maritime Provinces; the system at fault. A whole chapter given up to constitutional details, with a quotation from May's *Constitutional history* as the one spot of interest in the chapter! The struggle for responsible government is undoubtedly one of the most important episodes in the history of the British

North American colonies; but if the children of Canada are to be brought up on Mr. Clement's history they may be ready to forswear their birthright of freedom. Professor Roberts has written the history of the country of whose literature he is the greatest pride with the eye of a poet and the charm of a novelist. It is a matter of doubt whether avowed history has ever been written so well for school boys and school girls. Children to whom it has been given have read it through with the enthusiasm which they usually reserve for Henty and their other favorite writers; and older people have been known to read it almost at a sitting. It is written in a style which, though here and there it betrays evidences of haste, is remarkably brilliant and sustained; and the volume will take nothing away from the reputation which Professor Roberts has made as a novelist and a poet. With a true artist's instinct he seizes upon the salient points of the history and makes them the central points of his narrative, and the result is a living picture of Canada's life and growth. He cannot mention the Miramichi fire (to which Mr. Clement gives three lines) without presenting to us a picture of the lonely life of the back settlements, the horrors of the calamity, and the long-lasting effects. His treatment of the story of Mme. La Tour, the most dramatic episode in Canadian history, to which Mr. Clement barely refers, gives us a "short story" of unrivaled brilliancy and color. We seem to live again in the stormy ages of intrigue and violence, and to feel that the writer has known the men and the women of whom he writes. Again, his description of the hardships of the early loyalist settlers, and his picture of their social life, is worth volumes of such writing as is usually forced upon children. There is no overloading with dates and events, but the historic accuracy is beyond question. In one place his rather rampant Canadianism betrays him into an inadequate account of the war of 1812; inaccurate not so much in fact as in spirit. It is a misreading of history to say, as he does, that the Americans "had gone into it in a spirit of deliberate and wanton aggression," and came out of it with "nothing, indeed, but such a record as a proud people loves not to dwell upon." But perhaps such a view is the natural outcome of the grow-

ing national consciousness to which the idea of the competition was due. Professor Roberts's history ranks among his best work and will add not a little to his reputation. It is not often that a man who has won a name for himself as a poet and a man of letters has turned his attention to the writing of a school history; and the result is so good that one could wish that school books were more frequently written by men of letters.

Mr. Calkin's book, while, like Professor Roberts's, unsuccessful, is also much better than the history which received the award. It is a careful, conscientious piece of work, scrupulously accurate, well, though not brilliantly written, and well suited for ordinary school purposes. It would be unfair to compare it with Professor Roberts's history, because it belongs to an entirely different class. But in its class it is a piece of good workmanship, and, compared with Mr. Clement's book, an altogether admirable production. Mr. Clement's book has, curiously enough, been prescribed in New Brunswick only, but it is likely to be withdrawn from the curriculum. If Professor Roberts's book is too brilliant for introduction in its place, Mr. Calkin's will admirably fill the place of the conventional text-book.

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NOTES ON NEW BOOKS

Mention of books in this place does not preclude extended critical notice hereafter.

Professor Goldwin Smith's *Guesses at the riddle of existence* contains five essays on questions fundamental to religion. They are controversial without being truculent, and candid without being unfair (New York: The Macmillan Company, 1898. 244 p. $1.25).——The second number in the series of *Grosse Erzieher* is *Basedow*, by Pastor Diestelmann of Uhlshausen. It is a straightforward and adequate sketch of Basedow's life and work (Leipzig: R. Voigtländer, 1897. 110 p. 1 M. 25 pf.).

VIII

EDITORIAL

Honorary Ph. D. Degrees

Only two cases in which the degree of doctor of philosophy was conferred *causa honoris* at the Commencement of 1898, have come to our notice. They are:

Tufts College, Massachusetts: Professor William Leslie
Central High School, Philadelphia: Professor Frederick Foster Christine

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National Educational Association

The Washington meeting of the National Educational Association was very large, very harmonious, and distinctly helpful. The Capital City attracted nearly ten thousand teachers, making the meeting next in point of size to that at Denver in 1895. The programme contained many attractive features, and despite the numerous points of interest to be visited in and about Washington, the discussions were well sustained and attentively listened to, both at the general meetings and at the sessions of the several departments, although the attendance at any one meeting was never large. The "ring" was in evidence, as usual, but as everybody belonged to it, except two or three sad-looking individuals with something to sell, there was entire unanimity in all action that was taken and great satisfaction with everything that was done. In the unanimous election of Dr. Lyte to the presidency for 1899, a deserved tribute was paid to an exceptionally able and progressive man, a faithful servant of the Association for many years, and an admirable executive and presiding officer. Dr. Lyte's election is interesting, too, in that for the first time since 1885 this honorable office falls to a representative of the normal schools.

From the standpoint of general policy the Washington meeting was of exceptional importance. The long-discussed

project of securing the services of a paid and permanent secretary was consummated, on the unanimous recommendation of the Board of Directors, without a dissenting vote in a largely attended meeting of the active members. The constitution was amended by adding a provision that the secretary shall be elected for a term not to exceed four years, and his compensation fixed, by the Board of Trustees, the body corporate of the association. At the same time a member chosen by the Board of Directors was substituted for the secretary on the executive committee, and Dr. William T. Harris was elected to this position for 1898--99. The trustees subsequently, by unanimous vote, tendered the secretaryship to Dr. Irwin Shepard of Winona, Minn., for a term of four years from August 1, 1898, at an annual salary of four thousand dollars. Dr. Shepard has accepted the office and has already entered upon the discharge of his duties. For the present at least his residence and office will remain at Winona, Minn.

It is the intention that the permanent secretaryship of the National Educational Association shall be a high professional post, ranking with a college presidency or the superintendency of a large city; it is not a clerkship or a business managership, and cannot be satisfactorily filled by a man with none other than purely business qualifications. To say that Dr. Shepard is the ideal choice is to repeat what every member of the National Educational Association feels, and what his splendid and devoted service for five years past has abundantly proved.

The Board of Directors also took action to prevent the ill-considered appointment of committees to investigate this, that, and the other topic, and to publish reports of such investigations in the name of the association and at its expense, by passing a general rule referring all such applications to the National Council of Education for inquiry and report. Since the report of the Committee of Ten one request has rapidly followed another for appropriations in aid of "investigations," and there has been grave danger that the funds of the Association would be frittered away and its reputation injured by action of this kind taken without due considera-

tion. In future the directors will act in these matters only after the Council has expressed an opinion. In addition to assuming this new and important obligation the Council took steps to improve its methods, and hereafter will get along without a long list of standing committees, in the hope that papers of greater originality will be presented and fuller discussion introduced.

Corresponding Members

The Board of Directors also chose the following distinguished foreign educators to be corresponding members of the association: Miss Dorothea Beale, Principal of Ladies' College, Cheltenham, London, England; Signor Luigi Bodio, Direttore generale della Statistica del Regno, Roma, Italia; Professor Ferdinand Buisson, Professor of Education at the Sorbonne, Paris, France; Gabriel Compayré, Rector of the University of Lyons, France; Sir Joshua G. Fitch, LL. D., formerly Her Majesty's Inspector of Training Colleges, and Lecturer on Education at the University of Cambridge, 13 Leinster Square, Bayswater, W., London, England; S. S. Laurie, LL. D., Professor of the History and Institutes of Education in the University of Edinburgh, Scotland; Dr. E. Levasseur, Professor at the College of France, President of the Statistical Commission for Primary Instruction; Friedrich Paulsen, Ph. D., Professor of Philosophy and Education in the University of Berlin, Germany; Michael Sadler, A. M., Director of Special Inquiries and Reports, Department of Education, Whitehall, S. W., London, England; Hon. E. Lyulph Stanley, Member of the London School Board.

Declaration of Principles

At the closing session, the chairman of the committee on resolutions reported the following declaration of principles, which was unanimously adopted:

The National Educational Association, representing the teachers of the United States, at this its Thirty-seventh Annual Convention, makes the following declaration:

The integrity of our educational system can only be threatened by ignorance and by political corruption. A sound and intelligent public opinion

must be in the future, as it has been in the past, the support of every movement to elevate the ideals and to strengthen the efficiency of our schools, public and private, higher and elementary, general and special. To labor unceasingly to produce such a public opinion is a main duty of the teaching profession, and to stimulate and instruct it a leading purpose of our professional gathering. We ask our fellow-citizens to give heed to the needs of our educational system, to protect and develop it, and particularly to guard it from damage through parsimony and political chicane. The suffering and loss so inflicted fall not chiefly upon the teachers or upon the citizens themselves, but upon the nation's children, who are in due time to assume the responsibility for the preservation of our institutions. To limit their opportunities for a sound education is to strike a deadly blow at the republic itself.

We deplore and resent the tendency manifest alike in cities and in rural districts to treat the public-school service as political spoils, and to attack the reputation and professional standing of teachers and superintendents for political reasons alone. Political preferences and religious faith have no place in estimating professional efficiency, and we demand that the selection, promotion, and displacement of school officers and teachers be made on professional grounds alone.

We are glad to recognize that the schools exist solely for the education of the pupils, and not as a means of support for teachers; yet because of the increasing demands made upon teachers, and the exacting character of their preparation and work, it is in the public interest that their compensation be so adjusted as to encourage them to make teaching a life work, and to secure recognition for long-continued service and efficiency.

We invite attention to the dangers to the public health that result from the contact of children in crowded schools, unless both the children and the community are protected from the spread of contagious diseases by constant medical inspection and the skilled oversight of sanitary and hygienic conditions. It is the duty of every community, particularly of every large city, to make provision for such inspection and oversight. This policy is not only one of true economy, but also of enlightened self-interest.

The forward movement in education has our unwavering and enthusiastic support. Education is that social function by which the products of civilization are transmitted and enriched, and in this process the school plays a leading part. Insight into the forces that have shaped human development and the sympathetic study of the growing child are the mainsprings of its work. We urge upon teachers generally the appreciation of this fact, as well as the necessity for so shaping their studies and reading as to increase their knowledge in both of these directions.

The accepted division of the work of instruction into elementary, secondary, and higher is a convenient classification for administrative purposes, but it must not be allowed to conceal the fact that intellectual and moral development are constant and continuous and that all education is essentially a unit. Every type or class of school is affected by the efficiency or the inefficiency of other schools associated with it in the educational system. The best interests of elementary education require association with, and support from, secondary and higher educational institutions that are freely

open to the children of the people, in order that the standard of our civilization may be constantly raised by an increasing number of men and women trained for leadership.

We welcome every new step in the steadily advancing movement to increase the necessary qualifications for teachers. A high-school education, and at least one additional year's professional study of the history, principles, and practice of teaching should be the minimum, toward the establishment of which we should work.

We tender to the President and to the other officers of the Government an expression of our sympathy and patriotic support in the unhappy contest in which our country is engaged. Much as war is to be deplored, the teachers of the United States recognize that the present struggle, now being so triumphantly prosecuted, has been entered upon in the most unselfish spirit and from the loftiest motives. The cause of freedom and humanity is promoted, and the solidarity both of the American people and of the Anglo-Saxon race vastly increased, by an armed contest conducted in such a spirit, for such purposes, and with such determination and valor. The nation's great army of peace extends to the nation's soldiers and sailors their congratulations and their grateful appreciation for the manifestation of the high qualities of courage and of skill that have won so brilliant a succession of victories for the American arms, both on land and on sea.

Dr. Harris on the Nation's Duty and Opportunity

It is important that teachers and citizens generally should ponder some of the considerations that the war with Spain and its results force upon us. We therefore take pleasure in reproducing, in full, the important contribution to this subject made by Dr. Harris in his address given at the opening session of the National Educational Association at Washington:

It is fitting that you hold this annual session at the Capital of the Nation. You meet here at an important epoch in the history of our country. The annual census of the United States in 1880 showed for the first time an aggregate of over fifty millions of inhabitants. It was a true remark then made by one of us, in a session of the Department of Superintendence, that America had now for the first time ascended above the horizon of Europe. We had become visible to Great Britain and its peers on the Continent as a nation of equal rank, and to be taken account of in future adjustments of the powers of the world. In that year we had reached the full stature of national manhood, and were as strong as the strongest nations of Europe in numbers and wealth-producing power. After another ten years, in 1890, we found that in effective size and strength we surpassed, in wealth-producing power and in numbers, the most powerful of them.

It has been only a question of time when we should take our place among the nations and have our share in the management of the affairs of

the world; when we should be counted with the great powers of Europe in the government of Asia, Africa, and the isles of the sea. It was a moment to be postponed rather than hastened by the patriotic citizen. When our power of producing wealth is increasing out of proportion with the rest of the world, and when our population is swelled by waves of migration from Europe, why should we be in feverish haste to precipitate the new era of close relationship with the states of Europe? for that lies beyond the parting of the ways and the beginning of an essentially new career. Most of what is old and familiar to us must change and give place to new interests. Once the United States enters upon this career, all its power and resources must be devoted to adapting it to the new situation and defending its line of advance. For it cannot move back without national humiliation.

And it is this very summer that the hand on the dial of our history has pointed at twelve, and for better or worse we have entered upon our new epoch as an active agent in the collected whole of great powers that determine and fix the destiny of the peoples on the planet. This new era is one of great portent to the statesmen of America. All legislation hereafter must be scrutinized in view of its influence upon our international relations. We cannot any longer have that smug sense of security and isolation which has permitted us to legislate without considering the effect of our action on foreign nations. Hereafter our chief national interest must be the foreign one, and consequently our highest studies must be made on the characters, inclinations, and interests of foreign powers. It is obvious that this study requires a greater breadth of education, more careful studies in history and in the manners and customs of European nations; their methods of organizing industries as well as their methods of organizing armies and navies. We must even master foreign literatures, and see what are the fundamental aspirations of the people who read them. All this study concerns the system of education in this country. It indicates the function of the schoolmaster in the coming time.

The new burden of preparing our united people for the responsibilities of a closer union with Europe and for a share in the dominion over the islands and continents of the Orient—this new burden will fall on the school systems in the several States, and more particularly on the colleges and universities that furnish the higher education. For it is higher education that must direct the studies in history and in the psychology of peoples which will provide our ministers and ambassadors abroad their numerous retinues of experts and specialists thoroughly versed in the habits and traditions of the several nations. The knowledge required by our members of Congress and our executive departments will make a demand upon higher education for post-graduate students who have concentrated their investigations upon points in international law and the philosophy of history. Diplomacy will become a great branch of learning for us.

This has been felt for some time, although it has not been consciously realized. In the past twenty-five years the enrollment in higher education, in college work alone, has increased from 590 to 1210 in the million; it has more than doubled in each million of people. The post-graduate work of training experts or specialists has been multiplied by 25; for it has increased from a total of 200 to a total of 5000 in the nation.

The education of the elementary school fits the citizen for most of his routine work in agriculture, manufactures, commerce, and mining. But the deeper problems of uniting our nation with the other great nations, and harmonizing our unit of force with that greater unit, must be solved by higher education, for it alone can make the wide combinations that are necessary. Shallow elementary studies give us the explanation of that which lies near us. They help us to recognize our immediate environment, but for the understanding of deep national differences and for the management of all that is alien to our part of the world, deeper studies are required. The student must penetrate the underlying fundamental principles of the world history in order to see how such different fruits have grown on the same tree of humanity. We must look to our universities and colleges for the people who have learned to understand the fashions and daily customs of a foreign people, and who have learned to connect the surface of their everyday life with the deep national principles and aspirations which mold and govern their individual and social action. Hence the significance of this epoch in which we are assembled to discuss the principles of education and its methods of practice. There have been great emergencies, and great careers have opened to American teachers, in our former history; but we stand to-day on the vestibule of a still more important time-period: it is the era of the union of the New World with the Old World.

Politics and Education in Chicago

The raid upon Superintendent Lane and Colonel Parker, organized by Mayor Harrison, Corporation Counsel Thornton, and their clique, presents as many points for adverse criticism as any educational occurrence in some time past. The net result, as appears on the surface, is the re-election of Colonel Parker for one year by a vote of thirteen to five blanks, and the defeat of Mr. Lane by a vote of six to fifteen for Mr. E. Benjamin Andrews, formerly president of Brown University. Mr. Lane ought also to have been elected, and would have been but for the despicable cowardice of two of his alleged supporters, who had interests before a political convention to protect; the convention being in the hands of Mayor Harrison's party friends. The failure of these men to vote put off the election for superintendent until the mayor had a chance to pack the board of education with men pledged to support Mr. Andrews without any regard to the merits of the case.

The astonishing feature of this whole performance is that no pretense was made that either Colonel Parker or Mr. Lane was incompetent or inefficient. The severest critics of Colonel Parker's theories do not deny

his effectiveness or that he trains splendidly enthusiastic teachers. Mr. Lane has long been a leader in his profession, a man of national reputation, and one whose services to Chicago and whose sacrifices for it should lead every self-respecting resident of that city to look up to him with affection and with pride. The one criticism that has been whispered against him is that he lacks backbone; and this has come from the very men who, loading him with a pressure almost too heavy for a mortal to bear, have refused to allow him a support to lean against! For it must be borne in mind that the duties of the post that Mr. Lane has filled exist by courtesy only, not by statute, and that the incumbent is wholly dependent on men who have been in the habit of demanding blood-money as the price of their support.

The pitiful wickedness of the transaction is shown in the retention of Mr. Lane as the new superintendent's chief of staff. This uncovers the whole plot to make a political place for a political friend. We believe that Mr. Andrews is innocent of conscious complicity in this job; but he has run a terrible risk. He has permitted himself to be chosen, by the agents of a group of political pirates, to a post for which he has no particular fitness and much obvious unfitness. To the best of our knowledge, Mr. Andrews has never uttered or written a word, and he has never done a thing, that suggests him as a fit and capable person to assume chief responsibility for the public-school system of a great city. It may be that he will rise to the height of a great opportunity, develop new powers and capacities, confound his present supporters, and become a satisfactory school officer. We sincerely hope that he will. To do this, however, he must first live down a wide reputation that is unfavorable. He is thought to be deficient in executive capacity, lacking in judgment, sadly uninformed as to education, and to have his eye fixed mainly on political prominence and preferment. This estimate of Mr. Andrews may be erroneous, but it exists and must be reckoned with.

Every friend of public education is bound to hope that Mr. Andrews will succeed. He will be generously supported, if he

acts so as to deserve support. But his own educational experience, the circumstances of his election, the character and motives of his supporters, and the use of his name as a weapon against so honorable and so successful a superintendent as Mr. Lane, are not good omens.

Public Kindergartens in Washington

Congress has at last yielded to the demand of public-spirited citizens of Washington that kindergartens be established as part of the public-school system, and an appropriation of twelve thousand dollars is available for that purpose during 1898--99. Both white and colored children are to benefit by this provision. There is no reason why, under Superintendent Powell's enlightened supervision, these kindergartens should not from the first be models of their kind. Mr. Powell can certainly be trusted to see that real kindergartens are established, and not day-nurseries. He will certainly shun "graduates" of the superficial and hot-house training schools with which the country abounds, and select as directors only women whose culture and technical preparation are in every way adequate. He will just as certainly provide them with competent, paid assistants and ample equipment. He will see to it that the compensation of the teachers is in fair proportion to their training, labor, and responsibilities. Then and then only will the Washington public kindergartens be what they may fairly be expected to be—models of organization and efficiency and a complete justification of the action of Congress in providing for their establishment.

The small but effective beginning made by Mr. B. Pickman Mann and by the few devoted supporters and workers of the Columbian Kindergarten Association, has now developed into this very substantial public undertaking, and another step forward has been taken in the march of sound educational principles.